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SOME ESSENTIALS
IN
MUSICAL DEFINITIONS

M. F. MAC CONNELL



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SOME ESSENTIALS
IN
MUSICAL DEFINITIONS
FOR
MUSIC STUDENTS

COLLECTED AND EDITED BY
M. F. MacCONNELL



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PREFATORY NOTE.

THE difficulty of finding certain definite musical information in available form for the use of music students has prompted the compilation of this volume. Its aim is to furnish something more complete than the average Catechism of Music, and also something less extended in scope and material than is offered by the several excellent volumes on the various subjects.

The most concise definitions have been selected, and the best authorities consulted.

M. F. MACCONNELL.

MARCH, 1902.

NOTE TO THE REVISED EDITION.

ENCOURAGED by the success of the book, I have carefully revised it throughout, recasting some chapters, adding new matter of interest, and greatly extending the final sections of the work.

M. F. MACCONNELL.

NEW YORK,
January, 1909

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SOME ESSENTIALS IN MUSICAL DEFINITIONS.

CHAPTER I.

MUSIC, SOUND, PITCH.

Music. Music is the science of harmonical sounds. It treats of the principles of harmony; of the properties, dependencies and relation of sounds to each other.

The *theory* of music is a science.

The *practice* of music is an art.

Sound. Sound is the sensation made on the organs of hearing by peculiar vibrations of the air.

Acoustics. Acoustics is the science which treats of the laws governing air vibrations and their production.

A Musical Sound. A musical sound is produced by sonorous shocks following each other at regular intervals and with sufficient rapidity of succession.

Noise. Noise is produced by an irregular succession of sonorous shocks.

Pitch. By pitch we mean the gravity or acuteness of a sound.

In saying that one tone is higher than another we signify that the higher tone is produced by more rapid vibrations than the lower tone.

Standards of pitch, or an accepted number of vibrations for a certain tone, have been recognized.

Given the pitch of a tone, the pitch of other tones may be established by the laws of acoustics.

Different standards of pitch have been recognized at different times. For instance, the following records are given :

In 1740 in England (Händel) $A' = 416$ vibrations ; $C' = 512$ vibrations.

" 1739 " Leipsic, $C' = 472$ "

" 1771 " St. Petersburg, $C' = 500$ "

" 1826 " Paris $A' = 440$ " $C' = 525$ vibrations.

" 1834 " Stuttgart $A' = 440$ "

" 1858 " France $A' = 448$ " $C' = 522$ vibrations.

" 1859 " France (ratified) $A' = 435$ " $C' = 522$ "

" 1859 " England $C' = 546$ " (opera pitch).

" 1885 the Vienna conference advocated and ratified the French standard of $A' = 435$ vibrations, $C' = 522$ vibrations.

What is called

Classical pitch, gives $C' = 515$ vibrations.

Concert " " $C' = 540$ "

French " " $C' = 517-522$ vibrations.

The philosophical standard of pitch gives $C' = 512$ vibrations.

The ratio of vibrations for each tone of a perfectly true major scale is as follows :

	C	D	E	F	G	A	B	C
	1	$\frac{9}{8}$	$\frac{5}{4}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{5}{3}$	$\frac{15}{8}$	2
vibrations	256	288	320	341.3	384	426.6	480	512

CHAPTER II.

ELEMENTS OF MUSIC.

Elements of Music. The three elements of music are Rhythm, Melody and Harmony.

Rhythm. Rhythm is the symmetrical grouping of sounds with reference to their accent and duration.

Rhythm is the metre of music.

Rhythm is the regular recurrence of long and short beats.

Melody. Melody is the term used to express a succession of tones that is musically effective.

Harmony. Harmony is the art of combining sounds simultaneously into chords, and treating these chords according to certain rules.

CHAPTER III.

RHYTHM, ITS SUB-DIVISIONS.

Rhythm. The two sub-divisions of rhythm are *accent* and *time*.

Accent divides a mass of notes into long and short.

Time divides these notes into groups of equal duration.

Rhythm does for these groups what *accent* does for notes.

An elementary or simple rhythm is one in which the notes of the melody nearly or wholly coincide with the number of beats in a measure. Thus:



Compound Rhythm. In Compound Rhythm the notes of successive measures do not so nearly coincide with the number of beats in a measure. Thus:



Rhythms, Duple. Duple rhythms occur where the measure divides naturally into halves, as expressed by the following time signatures:

$\frac{2}{1}$ $\frac{2}{2}$ $\frac{4}{4}$ $\frac{2}{8}$ $\frac{4}{1}$ $\frac{4}{2}$ $\frac{4}{4}$ $\frac{4}{8}$ ♩ C

Rhythms, Compound, Duple. Compound duple rhythms occur where the measure divides naturally into halves or quarters, and each of these sub-divisions into thirds; as expressed by the following time signatures:

$\frac{6}{2}$ $\frac{6}{4}$ $\frac{6}{8}$ $\frac{6}{16}$ $\frac{12}{4}$ $\frac{12}{8}$ $\frac{12}{16}$ $\frac{24}{16}$

Rhythms, Triple, Simple. Triple, simple rhythms occur where the measure divides naturally into thirds; as indicated by the following time signatures:

$$\frac{3}{1} \quad \frac{3}{2} \quad \frac{3}{4} \quad \frac{3}{8} \quad \frac{3}{16}$$

Rhythms, Compound, Triple. Compound triple rhythms occur where the measure divides naturally into thirds, and each of these sub-divisions again into thirds; as indicated by the following time signatures:

$$\frac{9}{4} \quad \frac{9}{8} \quad \frac{9}{16} \quad \frac{18}{8}$$

Rhythms, Peculiar. Peculiar rhythms occur where the measure divides into fifths, sevenths, etc.; as indicated by the following time signatures:

$$\frac{5}{4} \quad \frac{5}{8} \quad \frac{7}{4} \quad \frac{15}{8}$$

Rhythms, Combined or Complex. Combined or complex rhythms occur when two or three dissimilar rhythms are employed.

The following example of combined rhythms is from Mozart's "Don Giovanni." Three rhythms are here combined:

Danza Tedesca. ("La Teutsch")

Contradanza.

Menuetto.

etc.

Perhaps the best way to define the distinction between time and rhythm, is to note the different rhythms that may be observed with one time signature. Thus :



Poetical metres are applied in musical composition. The following instances, selected from examples by W. S. Rockstro, show the correspondence between poetical and musical rhythms :

Iambic, Dimeter, Acalectic.

Scherzo, op. 27. BEETHOVEN.



Anapaestic, Tetrameter, Brachycatalectic.

Rondo, op. 62. WEBER.



Alternate verses of Acatalectic and Catalectic Dactylic with a Spondee in each of the even places.

Symphony in A. BEETHOVEN.



CHAPTER IV

MELODY.

SECTION I. NOTES, RESTS, STAVES.

Melody. Melody is a general term used to express a succession of tones that is musically effective.

Notes. The distinctive sign of a musical tone is called a *Note*.

Rests. In contradistinction to notes, which are the signs of musical sounds, there are signs of silence. These signs of silence are called *Rests*.





STAVES AND CLEFS.



Staff or Stave. The five lines with the included four spaces on which notes are written, are called a staff or stave.

5th line	4th space
4th line	3rd space
3rd line	2nd space
2nd line	1st space
1st line	

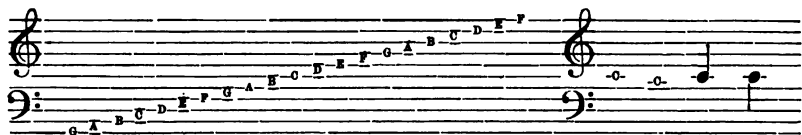
SECTION II. CLEFS.

Clef. The sign placed at the beginning of a stave and which determines the names of the notes written thereon, is called a *Clef*.

There are three clefs used in modern music: The C clef ; the G clef ; and the F clef  or 

The position of the C clef has determined the place on the stave of the middle C of the pianoforte; the G clef  represents the G or fifth above the middle C; the F clef  represents the F or fifth below the middle C.

In pianoforte music if the broken line used for the C between the bass and the treble staves were continuous, we would have an eleven-lined stave. While confusing to the eye it explains the difference of position for notes on the two staves. Thus :



Koch's *Musikalisches Lexicon* and other authorities, show how the three clefs are simply corruptions of old forms of the letters, C, G, and F.



A section of the eleven line stave is used in writing for voices, or for instruments of limited compass, and the placing of the C clef indicates definitely the position of the middle C and the name of the stave used.



So, when we see the Tenor clef, it signifies that with the C clef on the fourth line all notes on that line are represented by the middle C of the pianoforte.

The different clefs are used in modern music as follows :

1. Classical composers write the voice parts of their full scores with the soprano, alto, tenor or bass clefs. (Note the difference between soprano and treble clefs.)

2. In the so-called pianoforte scores of to-day, the treble clef is substituted for the soprano; and usually for the alto and tenor also, it being understood that the tenor is to be sung an octave lower than it is written, or in his natural range.

3. In music for the pianoforte, organ, harp, etc., the bass and treble clefs are used, the two staves being connected by a brace.

4. The treble or G clef is used in music for the violin, for flutes, oboes, high notes of the cello, clarinets, horns, trumpets, etc.

5. The alto clef is used in music for the viola.

6. The normal clef of the violoncello is the bass clef; but the higher notes are generally written with the tenor clef, occasionally with the alto clef; and the highest notes are written with the treble clef.

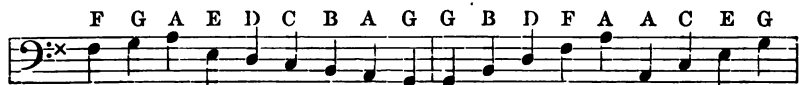
7. The bass clef is used for the contra-basso or double-bass; usually for the bassoon, though to save ledger lines, the tenor clef is used for the highest tones of this instrument.

So, given the clef, we can read the notes placed anywhere on the staff.

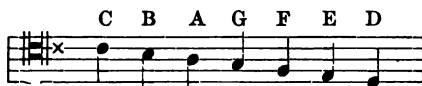
G Clef.



F Clef.



C Clef.



This combination of G and C clefs is used in some scores. In voice parts, it indicates that the part is to be sung by the tenor. In early harpsichord music, it indicates that the notes are to be played an octave lower than is indicated by G clef.

Ledger Lines. Notes may be written several degrees above or below the staff, by using short lines called "added" or "ledger" lines. In this way :



And still further above or below, until five lines above or below have been added, in the same order, as the compass of the instrument, for which the music is written, may require.

To obviate the use of too many ledger lines, simplify reading and save space, the sign *Sva* . . . is used to indicate that the notes are to be transposed an octave. When the sign is placed over the notes they are to be executed an octave higher than written ; when the sign is under the notes they are to be executed an octave lower. The word *loco*, or the termination of the dotted line, indicates a return to the written register.

Col. 8 . . . indicates that the octave above or below is to be played with the written notes.










CHAPTER V.

NOTES: THEIR NAMES AND VALUES.



Names of Notes. The names given to the notes on the staff are as follows :

In America . . . C, D, E, F, G, A, B.
 " England . . . C, D, E, F, G, A, B.
 " France . . . ut, re, mi, fa, sol, la, si.
 " Germany . . C, D, E, F, G, A, H.
 " Italy do, re, mi, fa, sol, la, si.


Kinds of Notes. The following are the different kinds of notes in use in modern music.


	A whole note	or	semi-breve.
	A half note	or	minim.
	A quarter note	or	crotchet.
	An eighth note ()	or	quaver.
	A sixteenth note ()	or	semi-quaver.
	A thirty-second note	or	demi-semi-quaver.
	A sixty-fourth note	or	hemi-demi-semi-quaver.

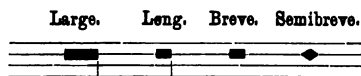
The following are the different kinds of rests in use in modern music. They correspond in value to notes.

	a whole rest.
	a half rest.

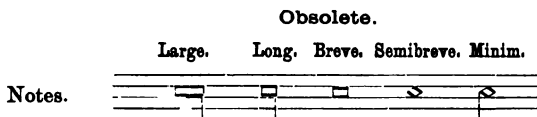
x or 7	a quarter rest.
7	an eighth rest.
7	a sixteenth rest.
7	a thirty-second rest.
7	a sixty-fourth rest.

Notes rarely used or quite Obsolete. The Breve or double whole note is equal to two whole notes and is written: 

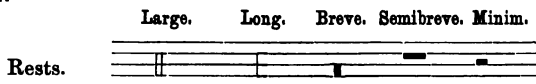
The corresponding rest is written: 



(Invented in the 11th century by Franco of Cologne.)

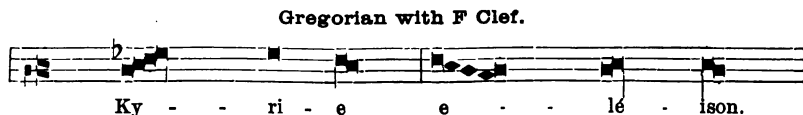


White headed notes were used in the 14th century, and even earlier.



These were always written on a five-line stave.

Gregorian Music or Plain Chant. The Roman Choral or Gregorian Chant is the music proper to the Roman Catholic liturgy. The notes are written on a four-line stave. The C and F clefs are used, and are movable. No time signature is used.



Same with Modern Notes.



Gregorian with C Clef.



In Modern Notes.



The most recently authorized version of Plain Chant is known as the Solesmes system. It was set down by the Benedictines of Solesmes (who since their expulsion from France have had their home in England), and it has received the stamp of authenticity from Pope Pius X and from the Sacred Congregation of Rites.

CHAPTER VI.

KEY SIGNATURE: SHARPS AND FLATS.

IMMEDIATELY following the clef, we find the key signature.

Key signature is the name given to the signs which indicate in what key or scale a piece of modern music is written.

These signs, which constitute the key signature, are the sharps or flats placed at the beginning of a composition, or their absence.

The sharps or flats of the signature, not only affect the notes on the lines and spaces indicated, but also the notes of the same name in all octaves.

Sharps, flats, double flats, double sharps, naturals, when occurring in the course of a piece, are called accidentals. Accidentals affect the changed notes only during the measure in which they occur.

Examples :



In France a sharp is called dièse.

In Germany a sharp is called Kreuz.

In France a flat is called bémol.

In Germany a flat is called Be.

In France a double sharp is called double dièse.

In Germany a double sharp is called Doppel Kreuz.

In France a double flat is called double bémol.

In Germany a double flat is called Doppelbe.

In France a natural is called bécarre.

In Germany a natural is called Quadrat.

A sharp \sharp indicates a half tone higher. (The sharp in a slightly different form was used at the end of the 13th and the beginning of the 14th centuries.)

A flat \flat indicates a half tone lower. (Used as early as 925.)

A double sharp \times indicates a whole tone higher. (Of comparatively recent origin.) (Sometimes written $\sharp\sharp$.)

A double flat $\flat\flat$ indicates a whole tone lower. (Of comparatively recent origin.)

The natural \natural cancels a preceding sharp or flat, double sharp or double flat, whether occurring in the key signature or in the course of a piece. (The natural was first used to cancel the flat about 1650. In the 18th century it was used to cancel the sharp.)

Chromatic alterations are known as :

In America and England.

France.

Germany.

C (sharp) \sharp

ut dièse

Cis

D (sharp) \sharp

re dièse

Dis

E (sharp) \sharp

mi dièse

Eis

F (sharp) \sharp

fa dièse

Fis

G (sharp) \sharp

sol dièse

Gis

A (sharp) \sharp

la dièse

Ais

B (sharp) \sharp

si dièse

His

C (double sharp) \times

ut double dièse

Cisis

D (double sharp) \times

re double dièse

Disis

E (double sharp) \times

mi double dièse

Eisis

F (double sharp) \times

fa double dièse

Fisis

G (double sharp) \times

sol double dièse

Gisis

A (double sharp) \times

la double dièse

Aisis

B (double sharp) \times

si double dièse

Hisis

C (flat) \flat

ut bémol

Ces

D (flat) \flat

re bémol

Des

E (flat) \flat

mi bémol

Es

F (flat) \flat

fa bémol

Fes

G (flat) \flat

sol bémol

Ges

A (flat) \flat

la bémol

Aes

B (flat) \flat

si bémol

Bes

In America and England.	France.	Germany.
C (double flat) <i>bb</i>	ut double bémol	Ceses
D (double flat) <i>bb</i>	re double bémol	Deses
E (double flat) <i>bb</i>	mi double bémol	Eses
F (double flat) <i>bb</i>	fa double bémol	Feses
G (double flat) <i>bb</i>	sol double bémol	Geses
A (double flat) <i>bb</i>	la double bémol	Aeses
B (double flat) <i>bb</i>	si double bémol	Bes

In Italy a *§* is called diesis.

In Spain a *§* is called sostenido.

In Italy a *x* is called doppio diesis.

In Spain a *x* is called doble sostenido.

In Italy a *b* is called bemolle.

In Spain a *b* is called bemol.

In Italy a *bb* is called doppio bemolle.

In Spain a *bb* is called doble bemol.

In Italy a *‡* is called becuadro (bisquadro.)

In Spain a *‡* is called becuadro.

CHAPTER VII.

KEY SIGNATURES.

THE following are the different key signatures in use in modern music :

Key of C major, or A minor.	Key of G major, or E minor.	Key of D major, or B minor.	Key of A major, or F \sharp minor.
			
No sharp. No flat.	One sharp.	Two sharps.	Three sharps.
Key of E major, or C \sharp minor.	Key of B major, or G \sharp minor.	Key of F \sharp major, or D \sharp minor.	Key of C \sharp major, or A \sharp minor.
			
Four sharps.	Five sharps.	Six sharps.	Seven sharps.
Key of F major, or D minor.	Key of B \flat major, or G minor.	Key of E \flat major, or C minor.	Key of A \flat major, or F minor.
			
One flat.	Two flats.	Three flats.	Four flats.
Key of D \flat major, or B \flat minor.	Key of G \flat major, or E \flat minor.	Key of C \flat major, or A \flat minor.	
			
Five flats.	Six flats.	Seven flats.	

The last sharp written in the signature is always the seventh tone of the major scale indicated.

The last flat in the signature is the fourth tone of the major scale indicated.

The same signature that represents a major key, represents also the key of the relative minor. Thus a piece without flat or sharp at the beginning is probably in the key of C major; but it may be in the key of A minor, the relative minor of C (or a minor third below C).

We recognize the major or minor key, (1) by the chords; the chords of the major differing decidedly from the minor; and, (2) the major or minor key is indicated also, and most definitely by this chromatic change: if the fifth or dominant of the major scale is raised a half tone, it has become the seventh, or leading note of the minor scale, thus:

Examples



5.



6.



7.



CHAPTER VIII.

SCALES.

"THE first indispensable requirement of music is a series of notes which stand in some recognizable relation to one another, in respect of pitch." — PARRY.

Pitch. The pitch of a musical note depends solely on the number of vibrations concerned in its production. The more rapid the vibrations, the higher the pitch.

Scale. The grouping together in regular order, according to pitch, of several tones, is called a scale.

Key. By key is meant a family of chords and the tones composing them, all bearing a fixed relation to a central tone called a key-note or tonic.

The keynote is the tonic or repose note of the scale.

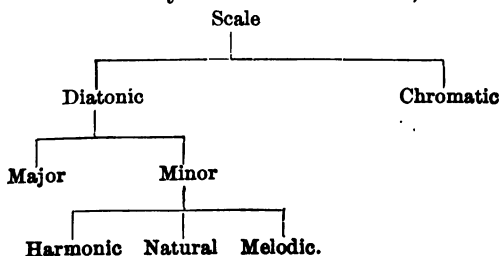
The two principal classes of scales in use in modern music are the Diatonic and Chromatic.

A Diatonic (through the tones) scale is one that consists of the tones belonging to the three principal harmonies of a key, and of no others; the tonic, sub-dominant, and dominant triads.

A Chromatic scale is one which proceeds by semitones.

The diatonic scales are divided into Major and Minor.

The minor scales may be either Harmonic, Melodic or Natural.



CHAPTER IX.

MAJOR SCALE.

THE diatonic major scale consists of seven principal tones following each other in regular order and according to this formula :

From 1 to 2 a whole step.
 From 2 to 3 a whole step.
 From 3 to 4 a half step.
 From 4 to 5 a whole step.
 From 5 to 6 a whole step.
 From 6 to 7 a whole step.
 From 7 to 8 a half step.

or: whole whole half whole whole whole half
 step step step step step step step
 1 — 2 — 3 — 4 — 5 — 6 — 7 — 8

half step

whole step

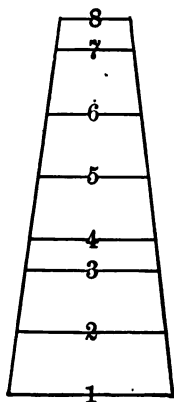
whole step

whole step

half step

whole step

whole step



The names given to the different degrees of the scale are :

8th tone	Tonic.
7th tone	Leading note.
6th tone	Sub mediant.
5th tone	Dominant.
4th tone	Sub dominant.
3rd tone	Mediant.
2nd tone	Super tonic.
1st tone	Tonic.

While only the signatures of fifteen major keys (to seven sharps and seven flats, besides the natural key) are in general use, a major scale may be formed from any given tone in the octave using when necessary, double sharps and double flats.

CHAPTER IX. (*Continued.*)

MINOR SCALES.

EVERY major scale has a relative minor.

The signature for both is the same.

The sixth tone of the major scale is the first of the relative minor.

The formula for the *Natural* minor scale is as follows : 6, 7, 1, 2, 3, 4, 5, 6.

The formula for the *Harmonic* minor scale is as follows :

1	2	3	4	5	6	7	8
1 step		$\frac{1}{2}$ step	1 step		1 step	$\frac{1}{2}$ step	$1\frac{1}{2}$ step

By number: 6, 7, 1, 2, 3, 4, #5, 6

The Harmonic minor scale is the same ascending and descending.

The only differences between a major scale and the scale of its relative harmonic minor are (1) the "starting" note; and (2) the fifth note of the major scale is chromatically raised and forms the 7th or leading tone of the relative minor.

See following pages for Examples.

The melodic minor scale, as its name indicates, is used exclusively for melodic work. This scale proceeds by steps or half steps. The harsh augmented second is avoided.

The formula for the melodic minor scale, which is different ascending and descending, is :

	whole step	half step	whole step	whole step	whole step	whole step	half step
Ascending	1	2	3	4	5	6	7
	whole step	whole step	half step	whole step	whole step	half step	whole step
Descending	8	7	6	5	4	3	2



By number: 6, 7, 1, 2, 3, #4, #5, 6, 5, 4, 3, 2, 1, 7, 6

The image displays three pairs of musical staves, each pair representing a major scale and its relative minor scale. The scales are written in treble clef with a key signature of one sharp (F#) for the major scales and one flat (Bb) for the relative minor scales.

- First Pair:**
 - Major:** D major scale (D-E-F#-G-A-B-C#-D).
 - Rel. Minor:** B minor scale (B-C-D-E-F-G-A-B).
- Second Pair:**
 - Major:** E major scale (E-F#-G-A-B-C#-D#-E).
 - Rel. Minor:** C minor scale (C-D-E-F-G-A-B-C).
- Third Pair:**
 - Major:** F major scale (F-G-A-B-C-D-E-F).
 - Rel. Minor:** D minor scale (D-E-F-G-A-B-C-D).

Each scale is written on a single staff, with the major scale on the top staff and the relative minor scale on the bottom staff. The notes are written in a sequence that shows the ascending and descending patterns of the scales.

CHAPTER X.

THE CHROMATIC SCALE.

Chromatic Scale. The chromatic scale proceeds by half steps, as when every key of the piano, black and white, is touched in succession.

C. Hubert K. Parry says, "With regard to the writing of the chromatic scale the most consistent practice is obviously to write such accidentals as can occur in chromatic chords without changing the key in which the passage occurs. Thus taking the key of C as a type, the first *accidental* will be $D\flat$ as the upper note of the minor ninth on the tonic; the next will be $E\flat$ the minor third of the key, the next will be $F\sharp$ the major third of the super tonic, and the remaining two will be $A\flat$ and $B\flat$ the minor of sixth and seventh of the key.

"In other words, the twelve notes of the chromatic scale will be the tonic, the minor second, the major second, the minor third, the major third, the perfect fourth, the augmented fourth, the perfect fifth, the minor sixth, the major sixth, the minor seventh, and the major seventh."

The chromatic scale in the key of C will read :



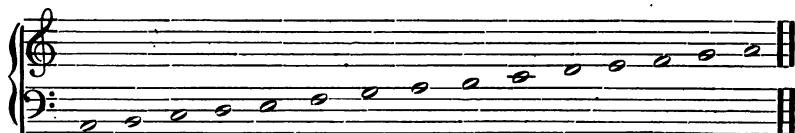
The practice of composers with regard to the writing of the chromatic scale is very irregular.

To classes in sight-singing the Chromatic scale is taught as :

1	#1	2	#2	3	4	#4	5	#5	6	#6	7	8
do	di	re	ri	mi	fa	fi	sol	si	la	li	ti	do
8	7	b7	6	b6	5	b5	4	3	b3	2	b2	1
do	ti	te	la	le	sol	se	fa	mi	me	re	rah	do

OTHER SCALES.

THE *Diatonic* scale is of Greek origin. As settled by Pythagoras, B.C. 570-510 (?) the entire Greek diatonic scale of two octaves is represented as follows:

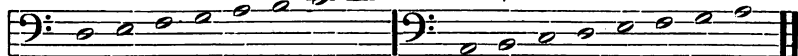


By dividing this scale into sections, each consisting of eight notes, and each beginning with a different sound, the fourteen Modes (Ecclesiastical) are obtained.

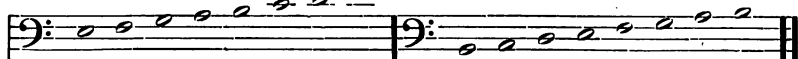
These modes are divided into two classes : Authentic and Plagal. The following table gives the fourteen modes with the names of their Greek prototypes added :

Plagal Modes.

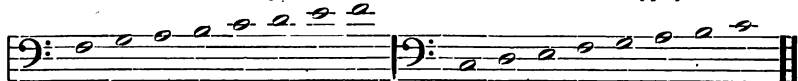
The Hypodorian Mode.



Hypophrygian Mode.



Hypolydian Mode.



Mode VII. Mixolydian Mode. Mode VIII. Hypomixolydian Mode.

Mode IX. Eolian Mode. Mode X. Hypoeolian Mode.

Mode XI. Locrian Mode. (rejected). Mode XII. Hypolocrian Mode. (rejected).

Mode XIII (or XI). Ionian Mode. Mode XIV or (XII). Hypoionian Mode.

German Scale. The German scale is a scale of the natural notes A B (H) C D E F G. B stands for B \flat , H for B \sharp .

Natural Minor Scale. The Natural Minor scale is the section of the Greek Diatonic scale beginning with A.

Guido's Scale, or the Aretinian Scale. Guido d'Arezzo (eleventh century) is credited with introducing a method of writing notes on a staff consisting of eight lines and seven spaces. Later he reduced the number to five lines and four spaces. The first syllable of the first stanza of the following hymn sung in Roman Catholic churches on the feast of St. John the Baptist, suggested to him the names of the six notes of his scale :

Ut que - ant lax - is Re - so - na - re fi - bris

Mi - ra ges - to - rum Fa - mu - li tu - o - rum



Enharmonic Scale. The Enharmonic scale is a scale proceeding by intervals less than the diatonic and chromatic.



These intervals can be sung, or played on the violin, etc., but it is not possible with keyed instruments, like the piano, to give the difference between enharmonic intervals. The Greek enharmonic genus, the Tetrachord, consisted of a progression of two quarter-steps and a major third.

In modern music, an enharmonic change is a change of name without a change of pitch, thus:



The Magyar or Hungarian Scale. The Magyar or Hungarian scale contains two augmented intervals with an augmented fourth, thus:



The Turkish Scale. The Turkish scale is not formed of a succession of octaves, but of a succession of equal tetrachords, all of these tetrachords being separated by the interval of a whole tone. Each tetrachord consists of a half tone, a tone and a half, and another half tone. Thus: C D \flat E F; begin the next tetrachord on G; G A \flat B C. This completes the octave. But the next tetrachord, beginning on

CHAPTER XII.

TIME.

The time signature is placed immediately after the key signature

The time signature indicates the number of beats or pulsations in a measure, and the unit of each pulsation or beat.

Thus $\frac{3}{4}$ indicates that a quarter note value is the unit, and there are three of these quarter beats or pulsations in a measure.

There are two distinct orders of time signature, known as, (1) common or duple time, when the number of beats is divisible by two; and (2) triple time, when the number of beats is *only* divisible by three.

Common or Duple Time. Under the head common or duple time are the following time signatures:

$\frac{2}{4}$	$\frac{3}{4}$	$\frac{2}{2}$	$\frac{4}{4}$	$\frac{8}{8}$	$\frac{2}{4}$	$\frac{3}{8}$	$\frac{4}{8}$
$\frac{4}{16}$	$\frac{6}{4}$	$\frac{6}{8}$	$\frac{8}{8}$	$\frac{8}{16}$	$\frac{12}{8}$	$\frac{12}{16}$	etc.

Triple Time. Under the head of triple time are these:

$\frac{3}{2}$	$\frac{3}{4}$	$\frac{3}{8}$	$\frac{9}{8}$	$\frac{9}{16}$	etc.
---------------	---------------	---------------	---------------	----------------	------

Quintuple or Septuple Time. Quintuple and septuple time are anomalous forms used occasionally, though rarely. ($\frac{5}{4}$ $\frac{7}{4}$)

(The different time signatures in use in modern music will also be found under the head of "Rhythm.")

There is a difference of opinion among musicians as to whether the term "time signature" should not be superseded by the term "meter signature."

By the term *Time* is commonly understood the number of units in a measure.

By the term *Meter*, the grouping of varied note values in a melodic phrase, or the feet in a line of poetry. Meter is the rhythm of the phrase. Meter in music and meter in poetry are analogous.


CHAPTER XIII.

MEASURES, BARS.

Measures. A measure consists of the group of beats contained between the bar lines.

Bar lines. The bar lines are vertical lines dividing the staff into measures.

A Double Bar  indicates completion, the end.

A double bar with dots  indicates repetition.



CHAPTER XIV.

WORDS TO INDICATE MOVEMENT OR MOOD.

WORDS placed at the beginning of a piece of music indicate, relatively, the speed with which the accents follow each other, or the general character or movement of a piece. Thus from the slowest to the quickest movements we have—

<i>Grave or Larghissimo</i>	Extremely slow, heavy, grave.
<i>Largo</i>	Slow, solemn.
<i>Larghetto</i>	Not quite so slow as <i>Largo</i> .
<i>Adagio</i>	Slowly (ad, at + agio, convenience, leisure, ease).
<i>Langsam or Lento</i>	Slowly.
<i>Andante (andare, to go)</i>	Moderate time (usually understood slowly).
<i>Andantino</i>	Should mean slower than <i>Andante</i> , but now generally understood as less slow.
<i>Moderato</i>	Moderate.
<i>Allegretto</i>	Light and cheerful but not so fast as <i>Allegro</i> .
<i>Allegro (alacer, merry)</i>	Quick, lively.
<i>Presto</i>	Quickly.
<i>Prestissimo</i>	Very quickly or as fast as possible.
<i>Vivace</i>	With life and vivacity.

Increasing or diminution of tone is indicated as follows :

Increase		or <i>crescendo, cres.</i>
Diminish		or <i>diminuendo, dim.</i>

These words may be combined with other words to indicate an accelerating or retarding of the movement. Thus :

Crescendo ed accelerando indicates, increase the tone and accelerate the time.

Diminuendo ed ritardando indicates, diminish the tone and retard the time.

<i>Rallentando</i>	Becoming slow again.
<i>Ritardando</i>	Slackening gradually.
<i>Ritenente</i>	Holding back.
<i>Ritenuto</i>	Held back, retarding at once.
<i>Mancando</i>	Decreasing.
<i>Stretto</i>	Pressed, hurried, quicker.
<i>Accelerando</i>	Increase or hurry the velocity or speed of the movement.
<i>Allargando</i>	Growing broader : slower and louder.

CHAPTER XV.

OTHER words and abbreviations frequently used are :

M.D. } R.H. }	Right hand	{ Main droit. <i>Fr.</i> Mano { destro { deritta or <i>It.</i> { dritta.
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M.G. } L.H. } M.S. }	Left hand	{ Main gauche. <i>Fr.</i> Mano sinistra. <i>It.</i>
----------------------------	-----------	--

<i>m</i>	<i>mezzo</i>	Moderately.
<i>M</i>	<i>mano or main</i>	Hand.
<i>pp</i>	<i>pianissimo</i>	Very softly.
<i>p</i>	<i>piano</i>	Softly.
<i>mp</i>	<i>mezza piano</i>	Moderately soft.
<i>mf</i>	<i>mezza forte</i>	Moderately loud
<i>f</i>	<i>Forte</i>	Loud.
<i>ff</i>	<i>Fortissimo</i>	Very loud.
<i>fz</i>	<i>Forzando</i> $\wedge \vee >$	Forced.
<i>sf</i>	<i>Sforzando</i>	Forced.
<i>Ped.</i>		Press damper pedal. The damper pedal (ordinarily and erroneously called the "loud pedal") raises the dampers from the strings, thereby allowing the strings to vibrate freely.

*		Release damper pedal.
<i>Una corda</i>		Press soft pedal (use one string).
<i>Tre corde</i>		Release soft pedal (use three strings).
<i>A poco</i>		A little.
<i>A poco a poco</i>		Little by little.
<i>A poco piu lento</i>		A little slower.

<i>Coll</i> }	With the.
<i>Colla</i> }	
<i>Collo</i> }	

<i>Colla destra</i>	With the right hand.	
<i>Piu</i>	More.	
<i>Il piu</i>	The most.	
<i>Il piu forte possible</i>	As loud as possible.	
<i>Istesso</i>	The same.	
<i>L'istesso tempo</i>	In the same time.	
<i>Meno</i>	Less.	
<i>Meno forte</i>	Less loud.	
<i>Meno mosso</i>	Less movement.	
<i>Nel</i>	} in the	Nell' tempo . . . in the time.
<i>Nella</i>		
<i>Nello</i>		
<i>Nell'</i>		
<i>Molto</i>	Much, extremely.	
<i>Assai</i>	Very, extremely.	
<i>Assez</i>	Enough.	
<i>E poi</i>	And then.	
<i>Stringendo</i>	Accelerating.	
<i>Alla stretta</i>	Increasing the time.	
<i>Al piacere</i>	} At pleasure.	
<i>piacere,</i>		
<i>ad libitum</i>		
<i>Tempo rubato</i>	{ Robbed or stolen time ; irregular time ; a slight deviation in time ; to give more expression.	
<i>Pesante</i>	Heavy.	
<i>Maestoso</i>	In a majestic style.	
<i>Schmerz</i>	Grief, sorrow.	
<i>Sec or secco</i>	Dry, unornamented.	
<i>Mesto</i>	Sad.	
<i>Sostenuto</i>	Sustained.	
<i>Marcato</i>	Marked.	
<i>Martelletto</i>	Like a hammer, heavy.	
<i>Mezzo</i>	} medium	Mezzo voce — half or medium voice.
<i>Mezza</i>		
<i>Da</i>	By, from, to.	
<i>Da capo</i>	From the beginning.	
<i>Doppio</i>	Double.	
<i>Doppio movimento</i>	A double movement ; equivalent to as fast again.	

<i>Con</i>	With.
<i>Con amore</i>	With tenderness.
<i>Con moto</i>	With movement.
<i>Sotto</i>	Under, below, softly.
<i>Sotto voce</i>	Voice under, or softly.
<i>Très</i>	Very.
<i>Très vite</i>	Very fast.
<i>Segue</i>	Follows.
<i>Sequitto</i>	Now as follows.
<i>Sequo coro</i>	The chorus follows.
<i>Sempre</i>	Always, continually.
<i>Sempre cres.</i>	Always increasing.
<i>Senza</i>	Without.
<i>Senza rit.</i>	Without retarding.
<i>Pochetto</i> }	A little.
<i>Pochettino</i> }	
<i>Prima</i>	First.
<i>Quasi</i>	In the manner of.
<i>Piu</i>	More.
<i>Piu forte</i>	Louder.
<i>Cantabile</i>	In a singing style.
<i>Andante cantabile</i>	Slowly, and in a singing style.
<i>Trio</i>	An independent and contrasting song form.
<i>Obbligato</i>	Indispensable, necessary.
<i>Dolce</i>	Sweetly.
<i>Con brio</i>	With vigor, animation.
<i>Sostenuto</i>	Sustained.
<i>Attaca subito</i>	Attack immediately or suddenly.
<i>Graziosa</i>	Gracefully.
<i>Morendo</i>	Dying away.

CHAPTER XVI.

NATURAL AND ARTIFICIAL GROUPS OF NOTES.

NATURAL groups of notes are those in which the notes retain their normal value.

In contradistinction to natural groups we have artificial groups, in which the notes have an abnormal value, this value being indicated by a numeral placed over the group.

The artificial groups most frequently met with are "Duoles," "Triplets," and "Sextolets."

Duole. A duole is an artificial group of two notes. A duole occurs when two notes fill the time of three notes of normal value. Thus :



Triplet. A triplet, triole, or triolet, is a group of three notes to be played or sung in the time of *two* notes of the same value. Thus :



Sextolet. A sextolet is a group of six notes having the value of four normal notes. A sextolet does not consist of two triplets, and it should not be divided in that way, either in writing or in performance.




Artificial groups of four, five, seven, or nine notes occur ; but in groups of larger numbers the notes are usually written in small type and treated as a cadenza. *Tirata* is the name that was formerly applied to any number of notes of equal value or length moving in conjunct degrees.


A figure indicating the number of notes in the group and a slur are always placed over these artificial groups.

If a series of triplets or sextolets occur, it is necessary to indicate in this manner, only the first group, or the first measure of the series.

CHAPTER XVII.

PROLONGATION OF NOTES.

THE length or the value of a note or rest may be prolonged by
(1) **A pause**  (It. *Fermata*).

A pause  (or hold) placed over or under a note or rest prolongs its value at the pleasure of the performer or conductor.

(2) **Dots.** A dot placed after a note or rest adds one-half to its value. Thus:



A double dot after a note adds $\frac{3}{4}$ of its value to the note; the first dot being worth half of the note's value, and the second dot being worth half of the first dot. Thus:



Triple dots have been used, but not recently. Dots have been placed at the beginning of a measure, taking their value from the last note of the preceding measure. This form has been replaced by the "tie."

(Usual form.)



(3) **Ties** (see next chapter).

CHAPTER XVIII.

TIES AND SLURS.

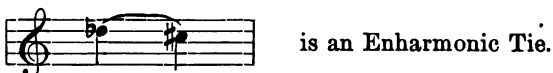
CURVED lines are either Ties or Slurs.

The Tie. If the curved line connects two notes on the same degree of the staff it is a Tie, and the first note is held for the value of itself and for that of the tied note.

But the value of the first note must extend to the second to make the tie good. Thus :



The curved line is a tie if it connects two notes enharmonically changed. Thus :



But if dots are placed over the notes joined by the curved line, it is no longer a tie; it is then a semi-marcato or portamento mark. Thus :



If the dot is only over the second of the two notes, the curved line is not a tie, but indicates the effect of a short slur.

All other curved lines are slurs.

The Slur. The slur has several uses.

1. It indicates the phrasing.
2. It calls for smoothness or legato effects. (For a stringed instrument played with a bow, it indicates one movement of the bow.)
3. Between two notes of quick or moderately quick time, it indicates that a certain accent or force must be given the first note, and the second note must be made shorter and weaker.
4. In vocal music it also indicates that one word or syllable is to be sung to the notes under the slur.
5. It partly counteracts the effect of staccato marks or dots if placed over $\cdot \cdot \cdot$ or under \smile the staccato marks.



CHAPTER XIX.

LEGATO AND STACCATO.

LEGATO and staccato are two terms used to indicate :


1. *Legato*, close, smooth, the opposite of staccato.
2. *Staccato*, short, detached.


Small dots or dashes over or under notes indicate staccato.

Modifications of legato and staccato are made by combining dots and slurs, thereby indicating the manner of performance.

 = very smoothly or legato.

 or  detached or staccato.

 Semi-staccato or marcato.

 non-legato ; called by some portamento ; literally a "carrying over" ; really a compromise touch which properly done gives a singing, caressing quality to the tone.

CHAPTER XX.

ACCENT.

Accent. Accent is the emphasis which certain notes receive. To be satisfactory (as a rule) these accents must recur at regular intervals. In quick common, or simple triple meter, there is but one accent in a measure; that given the first beat. But in slower, common meter there are usually two accents,—a strong one on the first beat of the measure, and a weaker accent on the second half of the measure. These accents are known as the *Grammatical* or *Metrical* accents. (See examples in chapter on rhythm.)

By *Oratorical* accents are meant the adaptation in vocal music of the notes to the words. In the best music the accent of the words fits the accent of the measures.

Syncopation. Placing the accent on the usually unaccented part of a measure is called syncopation. Examples in syncopation:



Syncopation is an artificial accent.

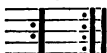
Accents are also indicated by these signs: *sf.*, *sfz.*, *fz.*, *sforzando*, or *forzando*, which indicate an accent on a single note or chord.

Rf., *rfz.*, *rinforzando*, may be applied to a note, a chord, or a passage, and indicates strength of tone without sudden accent.

CHAPTER XXI.

REPETITION SIGNS.

Marks of Repetition are : the double (or the heavy) bar with dots
or



Da Capo, D.C., which signifies from the head or beginning ; that is, "Repeat from the beginning and continue to the word *Fine*," the end, or to the mark \frown placed over a double bar.

Dal Segno, D.S. or ♩ signifies, Repeat from the sign ♩ or ♩ .

Bis, twice ; play or sing twice.

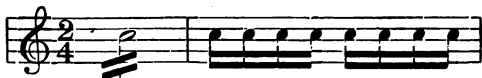
Simile ; like ; indicates that a series of passages of similar form should be repeated or performed in the same or like manner ; ♩ this sign is sometimes used for simile.

Da Capo e poi la coda indicates, Repeat from the beginning to the coda.

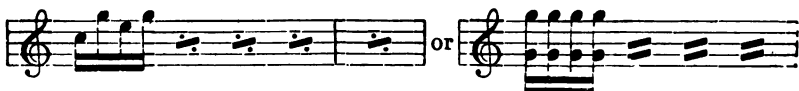
Al Fine indicates, to the end.

Al Fine e poi la coda indicates, that after playing to where *Fine* is marked, go on to the coda.

Oblique strokes which distinguish the 8th, 16th, or 32d note, if applied to the stem of quarter or half notes, signify as many repetitions of the shorter notes indicated as are equal to the longer note represented. Thus :



♩ indicates the repetition of a group of notes, or of an entire measure. Thus :



(Only one oblique bar is necessary if the notes are eighth notes, or three bars if they are 32d notes).

Figures placed over or in a measure in which rests are written, indicate the number of measures of silence



The double bar and dots signify "Repeat." The Primo volta (first time), play to double bar; in the repetition, omit measure 1 and play measure 2.



CHAPTER XXII.

EMBELLISHMENTS.

Embellishments. The principal embellishments (*Agréments, Fr.; Manieren, Ger.*) used in modern music are the following:

Trill or shake; Mordent; Prall trill, inverted mordent or bounding trill; Turn or Grupetto; Inverted turn; Appoggiatura; Acciacatura; Afternotes or Nachschlag; Slide; Arpeggio.

The Trill consists of a rapid alternation of a principal note and the next note above, in the same key; the alternation to continue for the full duration of the principal note. It is indicated in modern music by "tr" (generally followed by a waved line ~~~~~ over a long note), and in older music by ~ ~ ~, etc.

There has been some difference of opinion as to whether the trill should begin with the principal note or with the subsidiary note.

The rule most generally observed to-day, is to begin the trill on the principal note unless the principal note is preceded by a small note or notes.

The following examples will show how some trills have been edited:

Written.



Played.



EXAMPLES OF TRILLS.

From BEETHOVEN, op. 31, No. 1.
VON BÜLOW AND LEBERT Ed.



Played.



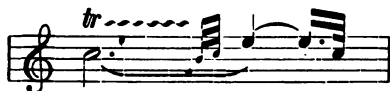
From same opus
and same ed.



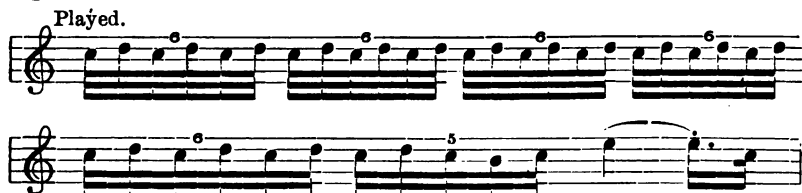
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From same opus
and same ed.



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BEETHOVEN, op 26, same ed.

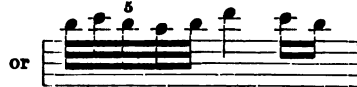
Played.



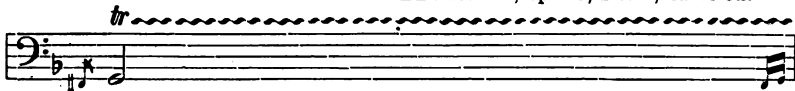


BEETHOVEN, op. 10, No. 2.

Played.



BEETHOVEN, op. 10, No. 2, same ed.



Played.



BEETHOVEN, op. 2, No. 2., same ed.

Played.



BEETHOVEN, op. 106, GERMER Ed.

Played.



Played.

Same ed. as above.

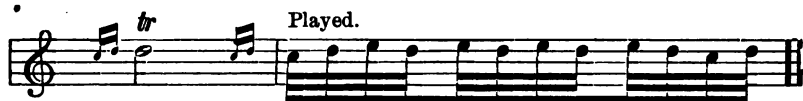


The following are examples from the Busoni ed. of Bach's Well-Tempered Clavicorn.



Prelude XVIII.





Prelude VIII.



Prelude X.



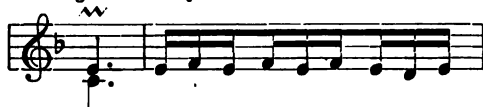
Prelude XI.



Prelude XII.



Fugue XI. Played.



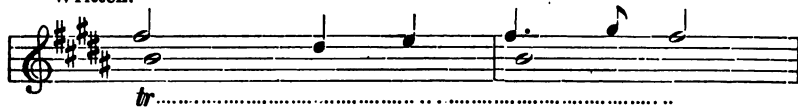
Fugue XIII.



If the trill forms the accompaniment to a melody both played by the same hand, if the melody notes lie near the trill, the trill is not interrupted ; if the melody is out of reach, a single note of the trill

is omitted for the melody note. In the latter case the accent of the trill must be on the upper note. Examples:

Written.



Played.



Written.



Played.



A trill is called Imperfect when it closes without a *turn*. Other examples of trills:

Written.



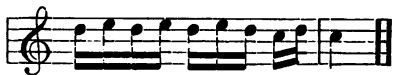
Played.



Written.






Played.





Played.



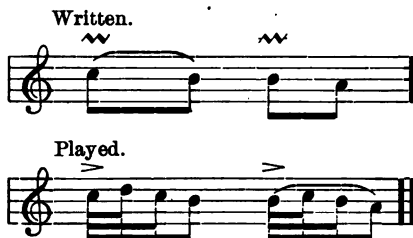
The Mordent. The mordent is a transient shake, made with the note written and the note below. The sign is this:  (note the vertical line through); or  for the long or double mordent.

The simple or short mordent  consists of three notes. The double or long mordent consists of five or more notes. Both kinds begin and end on the principal note. They are played as quickly as possible, and they always begin with the value of the written note; they should never be introduced before it.



Prall Trill. The prall trill, bounding trill, or inverted mordent  is made with the note written and the next above in the same scale, except where otherwise indicated by an accidental. Written thus  (without vertical line).

It takes its time value, like the mordent, from the note to which it is signed, and it is played as rapidly as possible. Thus :



THE TURN.

The Turn or Gruppetto. The common or regular turn (gruppetto) is indicated by the sign ~ or ∞ placed over or under the note, or over the space following the note. It consists of four notes executed in the following order. The note above the written note; the written note itself; the note below; and the written note again. Thus :



When the turn is written directly over the note, it takes the place of the note. If the turn is written after the note, then the note is played or sung first, and the turn follows.

Chromatic alterations in a turn may be indicated by writing the necessary accidentals over or under the turn.

The inverted turn ∩ simply inverts the order of performing the same notes, the lowest note being given first.

Examples of turns :



Turn with Dot.

Played.



Turn with Accidentals.

Played.

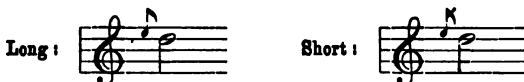


Inverted Turn.

Played.



The Appoggiatura. (Long and short.) An Appoggiatura is an accessory or grace note placed before a principal note. Its time is always taken from the principal note. An appoggiatura may be long or short.



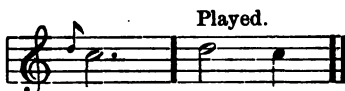
The long appoggiatura is distinguished from the short appoggiatura by the absence of the stroke across the stem.

The following rules apply to the length of the long appoggiatura (without the stroke ♪).

1. When the principal note can be divided into two equal parts the appoggiatura receives half. Thus :



2. When the principal note is dotted the appoggiatura receives two-thirds. Thus :

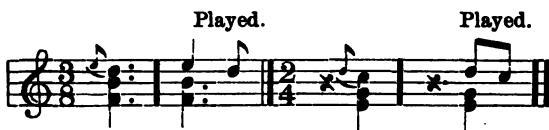


3. If the principal note is tied to another shorter note, the appoggiatura receives the whole value of the principal note. Thus:



(Exceptions to these rules are common. Taste and experience can best decide when exceptions are proper.)

The appoggiatura, whether long or short, is always included in the value of the principal note. If written before a chord, it delays only the note to which it belongs. Thus:



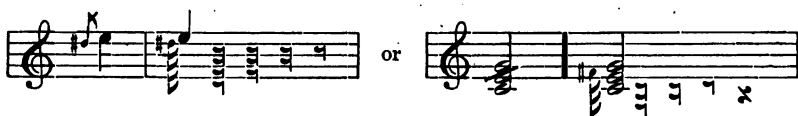
The short appoggiatura is a grace note, beginning at the time of the principal note and played as quickly as possible. It is recognized by the slanting line through its stem *K*.



A double appoggiatura consists of two grace notes, the first beginning on the beat, and both played as quickly as possible.



Acciaccatura. The word Acciaccatura is at present frequently applied to the form of ornament described as the short appoggiatura. Formerly it was written as we now write the short appoggiatura ♯, and it was struck *with* the principal note, but immediately released. It is now occasionally used in this manner by organists.



After Notes, or Nachschlag. After notes, or Nachschlag, consist of one or more grace notes introduced in passing from one melody note to another. They are generally connected to the principal note by a slur; and they never fall on the accent or the beat, but occur at the end of the note (taking their value from it), to which they serve as an ornament.



Slide. The Slide consists of three notes, either ascending or descending, the principal note being the third, the other two grace notes. The short notes are to be given within the value of the principal note, and not before.

Slides of more than three notes may occur. They are sometimes called by the name Tirade or Tirata.





The Arpeggio. The arpeggio, as an ornament, consists of the breaking or spreading of a chord either upwards or downwards. It is sometimes called an extension.



As a part of instrumental passages, an arpeggio consists of the notes of a chord played one after the other, in any order indicated.

CHAPTER XXIII.

CHORDS.

Harmony. Harmony is the art of combining sounds simultaneously into chords, and treating these chords according to certain rules.

A Chord. A chord is the simultaneous occurrence of several musical sounds, producing harmony.

Triad. The simplest chord is the triad. It is formed by adding a third and a fifth to a fundamental note.



Interval. The difference in pitch which separates two tones is called an interval.

Intervals are counted from the lower tone to the higher, thus,



The *general* name of an interval is its number; as a *third*, a *sixth*, etc.

The *specific* name of an interval indicates its kind; as a *major* third, a *diminished* seventh, an *augmented* fifth, etc.

All intervals are either perfect consonances, imperfect consonances, or dissonances.

Perfect Unisons or Primes	}	Perfect Consonances.
Perfect Fourths		
Perfect Fifths		
Perfect Octaves		

Major and minor Thirds } Imperfect Consonances.
 Major and minor Sixths }

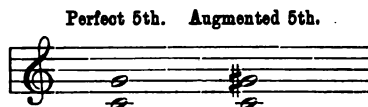
Major and minor Seconds }
 Major and minor Sevenths } Dissonances.
 and all Augmented and
 Diminished intervals }

All intervals in a major scale are either Perfect or Major.
 The prime, fourth, fifth, and octave are Perfect. The second, third, sixth, and seventh are Major.

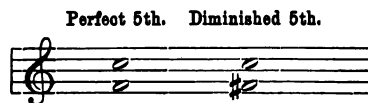
Lower the upper tone of a major *interval* and it becomes *minor*.



A perfect or a major interval made larger by *one* chromatic semitone, becomes an *augmented* interval.



A perfect or a minor interval made smaller by *one* chromatic semitone, becomes a *diminished* interval.



A major interval made smaller by *two* chromatic semitones becomes a *diminished* interval.

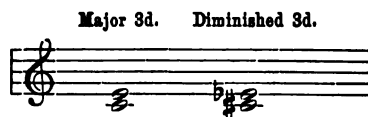
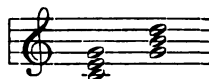


Table of intervals.

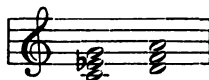
Primes. Perfect. Augmented.	Seconds. Major. Minor. Augmented.	Thirds. Major. Minor. Diminished.
		
Fourths. Perfect. Aug. Dim.	Fifths. Perfect. Augmented. Diminished.	Sixths. Major. Minor. Aug.
		
Sevenths. Major. Minor. Diminished.	Octaves. Perfect. Diminished.	Ninths. Major. Minor.
		

A similar schedule may be built from any and every chromatic tone of the octave.

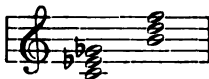
Triads are either *Major* (major 3rd, perfect 5th)



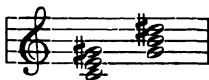
or *Minor* (minor 3rd, perfect 5th)



or *Diminished* (minor 3rd, diminished 5th)



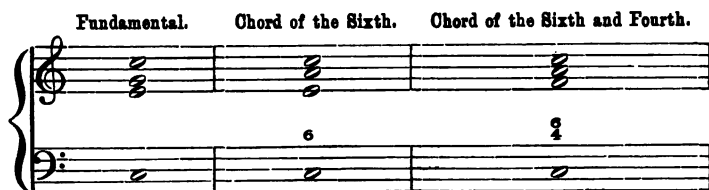
or *Augmented* (major 3rd, augmented 5th)



Inversions. The two inversions of any triad are called :

(1) The chord of the sixth, when the third of the triad is in the bass.

(2) The chord of the sixth and fourth, when the fifth of the triad is in the bass :



The chord of four tones, or the chord of the 7th, is formed by adding a third, fifth, and seventh to a fundamental tone.



The three inversions of all "chords of the seventh," are :

(1) The chord of the sixth, fifth, and third, called usually the chord of the sixth and fifth and figured $\frac{6}{5}$ or $\frac{5}{6}$; when the bass takes the third of the fundamental chord.

(2) The chord of the sixth, fourth, and third, called usually the chord of the fourth and third, and figured $\frac{6}{4}$ or $\frac{4}{6}$; when the bass takes the fifth of the primal chord.

(3) The chord of the sixth, fourth, and second, and figured $\frac{6}{2}$ or $\frac{2}{6}$; when the bass takes the seventh of the primal chord.



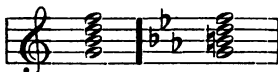
The position of the tones of the chord of the seventh and the inversions, in the three upper voices, in relation to the bass, may be arranged at pleasure or as the content of the music may demand.

The *chord* of the *ninth* consists of the 3rd, 5th, 7th, and 9th, being added to a fundamental tone.

The *chord* of the *eleventh* and the chord of the thirteenth consist respectively of the 3rd, 5th, 7th, 9th, 11th, and the 3rd, 5th, 7th, 9th, 11th and 13th being added to a fundamental tone.

The *chord* of the *dominant seventh* consists of the dominant tone of the scale (the fifth) with its 3rd, 5th, and 7th.

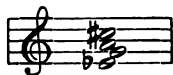
The *dominant seventh chord* is the same in the major and minor. Thus, the dominant seventh chords in C major and C minor are :



The diminished seventh chord is the chord of the seventh built from the seventh degree of the minor scale. It consists of a minor third, a diminished fifth and a diminished seventh. Thus :

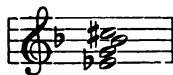


SOME MIXED CHORDS.



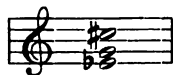
The French Sixth.

A major 3rd, augmented 4th, augmented sixth.



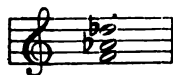
The German Sixth.

A major 3rd, perfect 5th, augmented sixth.



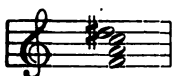
The Italian Sixth.

A major 3rd and augmented sixth.

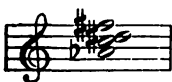


The Neapolitan Sixth. (The Neapolitan Sixth does *not* include the augmented sixth.)

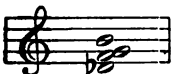
A minor 3rd, a minor 6th occurring on the sub-dominant or 4th degree of the scale ; or if the root of the supertonic triad in minor is chromatically lowered, the chord is a Neapolitan sixth.



The Augmented Six-Five-Chord.



Chord of the Doubly Augmented Fourth.



Chord of the Augmented Six-Four-Three.

The notes of any chord given in succession form an arpeggio.



The essential chords of a key are the chords of the tonic, dominant (or dominant seventh) and sub-dominant.



Played in harmonic succession, these chords are :

Major.

C: I IV V₇ I | I IV V₇ I | I IV V₇ I

Minor.

c: I IV V₇ I | I IV V₇ I | I IV V₇ I

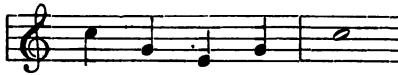
Motion. The motions of a single part are classified as “conjunct” and “disjunct.”

Conjunct motion occurs where the movement does not exceed the limits of a degree of the scale at a time.



Conjunct Motion.

Disjunct motion occurs where the movement does exceed the limits of one degree of the scale.



Disjunct Motion.

The motions of different parts are classified as similar (direct or parallel), contrary, and oblique.

Direct, parallel, or similar motion occurs when two parts ascend or descend simultaneously.



Direct or Parallel Motion.

Contrary motion occurs when two parts move in opposite directions.



Contrary Motion.

Oblique motion occurs when one of two parts remains stationary while the other moves.



Oblique Motion.

Modulation. 1. By Modulation is meant the transition from one key into another. 2. The connection of chords belonging to different keys by means of harmonies common to both is called Modulation.

Transposition. By Transposition is meant the performance of a musical composition in a different key from that in which it is written.

CHAPTER XXIV.

FORM.

Form. By form is meant the general plan of a musical composition.

Classes of Form. There are two great classes of form, the polyphonic and the monophonic.

Polyphonic Form. The polyphonic — many-voiced — form is that in which several voices, each intoning a melody, move simultaneously without discord.

Monophonic Form. The monophonic — one-voiced — form is that in which the melody is confined to a single part.

The essential difference between the polyphonic and the monophonic form lies in the distribution of repetitions.

The polyphonic form is distinguished by intellectual characteristics, and by an absence of the emotional.

Polyphonic Period. The polyphonic period extends from the beginning of the French School, 1100 A.D., to the death of Bach, 1750.

The works of Palestrina and John Sebastian Bach are the supreme development of the polyphonic form.

Polyphonic writing is based on counterpoint. Counterpoint is the art of combining melodies.

When the same melody is repeated by the various voices we have the canonic form.

Canons and fugues are the two important types of polyphonic style.

Canon. The canon is a rigid imitation, in which the voices begin one after another, each performing exactly the same melody.

Fugue. The fugue is a composition in which the subject announced by one voice is repeated or answered, with various modifications, by all the others in succession.

The important, the necessary parts of a fugue are: the subject, the answer, the counter-subject, and the stretto.

In a contrapuntal composition the different voices are not required to repeat the same melody. Two or more melodies may be combined. The fugue is the highest development of the polyphonic form.

The highest development of the monophonic or song form is the symphony.

Symphony. A symphony is a sonata written for a full orchestra.

Sonata. The sonata is the principal important and typical form of instrumental music.

When it is composed

for one instrument, it is called a Sonata.

for two instruments, it is called a Duo.

for three instruments, it is called a Trio.

for four instruments, it is called a Quartet.

for five instruments, it is called a Quintet.

for six instruments, it is called a Sextet.

for seven instruments, it is called a Septet.

for eight instruments, it is called an Octet.

for nine instruments, it is called a Nonet.

for orchestra, it is called a Symphony.

for orchestra and one solo instrument, it is called a Concerto.

(The words trio, quartet, quintet, etc., to nonet, are also used to express the combination of voices, three, four, five, etc.)

Chamber Music. Chamber music includes all that class of compositions written for small collections of instruments, and suitable for performance only in small rooms; as trios for piano, violin, and violoncello; quartets for first and second violin, viola, and 'cello, etc.

The Sonata. The sonata is the great type of the classic period, 1754-1804. The name Sonata is from *Sonare*, to sound.

The sonata is a succession of movements, intended to be performed consecutively, each movement being of a different character.

The sonata usually consists of a first movement called the allegro; a slow movement, the andante or adagio; and a third movement, the finale.

A minuet, a scherzo, or an intermezzo may be introduced between the second and third, or between the third and fourth movements.

The first movement, the allegro, must have a certain regular construction; and its construction is known and recognized as the

"first movement" or "sonata form." It consists of (I.) the Exposition or Proposition; (II.) Development or Discussion; (III.) Recapitulation or Conclusion.*

The second movement of a sonata is usually a slow one, and variable in form, though usually in Ternary form.

The third movement of a sonata of four movements is usually either a minuet or a scherzo in Ternary form.

The finale of a sonata is sometimes written in the same form as the first movement of the sonata; and sometimes it is written in the rondo form, and sometimes as a theme with variations.

The rondo is a "round" similar in form to the French poetic form "rondeau."

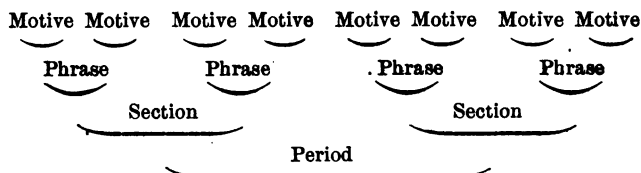
The rondo is the earliest and most frequent form for musical construction. It consists of one principal subject, to which a return is always made after the introduction of other matter.

Modifications of the rondo form serve as the skeleton for nearly every piece or song now written.

Song Form. The song form, or *Lied* form, is the form of a song. It is a form consisting of one, two, three, or at most five periods, making unity.

In the *Lied* form, or song form, is grouped all such music as have one single main idea, which is presented either in one developed section, or as a period (with first and second phrase), or even as a period divided into first and second similar parts, or into first, second, and third parts (when the third is generally a repetition of the first).

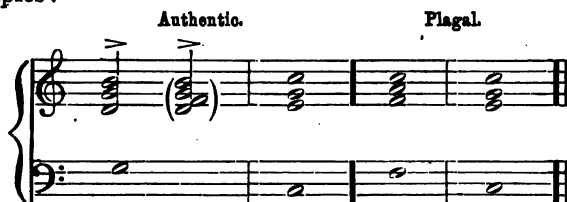
A Period is a complete musical sentence. A simple period consists usually of eight measures disposed in two sections of similar extent and rhythmic construction; each section of two phrases, and each phrase of two motives:



* First movements of Sonatas are not always in the Sonata form. See Mozart (A major), Beethoven (A flat, op. 26).

Cadence. A Cadence is the close of a period, of a strain, or of a piece of music. If the closing tonic chord is prepared by the chord of the Dominant, the Cadence is called Authentic; if prepared by the chord of the Sub-dominant, it is called Plagal.

Examples :



Suite. The suite, the predecessor of modern classical instrumental forms, had its origin in the early dance forms. The suite was at first a set of dance movements, and often called "partita." *

Dance Forms. Among the many dance forms used formerly for suites, or more recently as individual pieces, the following are most frequently met :

Allemande German air; an obsolete slow dance, originally in common time, beginning on the last beat.

Bolero Spanish dance, three-fourths time.

(Metre $\frac{3}{4}$  )

Barcarolle }
Gondoliera } Boat song; $\frac{3}{4}$ time.
Gondolied }

Bourrée } French dance in $\frac{3}{4}$ or $\frac{2}{4}$ time.
 Begins on fourth beat of measure.

Caprice A fanciful composition.

Cansone A song, ballad, or air, in two or three parts, with divisions of fugue or imitation.

Chaconne }
Ciaccone } A Spanish dance, $\frac{3}{4}$ time, composed on a ground bass.

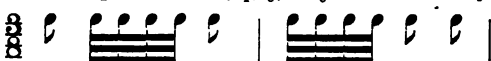
Courante Running; an old dance in triple time.

Cracovienne A Polish dance in triple time.

Csardas Magyar or Hungarian dance in $\frac{3}{4}$ or $\frac{2}{4}$ time.

Fackeltanz Dance with flambeaux (torches).

* There were English Suites, French Suites, German Suites, named according to the order in which the dances were arranged.

Fandango	Spanish dance, $\frac{3}{4}$, $\frac{3}{8}$, or $\frac{3}{2}$ time. This rhythm
	
Fantasia	A caprice.
Gavotte	A common-time dance beginning on third beat, or at the second half of the measure.
Gigue }	A jig, in duple time.
Jig }	
Gagliarda }	An old dance of merry character, usually in $\frac{3}{4}$ time. It originated in Rome, and was sometimes called Romanesca.
Galliard }	
Interlude }	A short piece introduced between the acts of a drama, or the play and afterpiece, or between verses of hymns.
Intermezzo }	
Habanera	Spanish dance, slow, $\frac{3}{4}$ time.
Minuet	Slow dance, $\frac{3}{4}$ time.
Musette	A pastoral air in imitation of a French bagpipe, with a drone bass in duple or triple time.
Mazurka	A lively Polish dance $\frac{3}{4}$ or $\frac{3}{2}$ time ; peculiar rhythmic construction.
Nocturne	A composition suitable for evening. An evening song.
Pavan }	From pavo, peacock. Stately dance, usually $\frac{3}{4}$ time.
Pavane }	
Passacaille }	A kind of chaconne with divisions on a ground bass in $\frac{3}{4}$ time, and always in a minor key.
Passacaglio }	
Paspy (passepied)	A sort of jig or quick minuet ; a lively old French dance in $\frac{3}{4}$, $\frac{3}{8}$, or $\frac{3}{2}$ time.
Polonaise	A chivalrous Polish dance in $\frac{3}{4}$ time, having a movement of $\frac{3}{8}$ (in rhythm of 2's) with extra accent on the fifth. The second $\frac{3}{8}$ is generally divided into $\frac{1}{8}$.
Rigaudon	A lively French or Provençal dance, in duple or triple time.
Sarabande	Spanish or Saracenic dance, triple time, with castanets.
Sicilienne	Dance of Sicilian peasants, duple time, $\frac{3}{4}$ or $\frac{1}{2}$.
Tambourin	A dance accompanied by the tambourine, duple time.
Tarentella }	A swift Italian dance $\frac{3}{4}$ in time. A popular story attributes to this dance the cure of the bite of the tarantula.

CHAPTER XXV.

OPERA.

Opera. A drama set to music.

An opera is a drama, either tragic, comic, or melodramatic, sung throughout (or nearly so), with appropriate scenery, acting, and with orchestra accompaniment.

The modern opera was the result of an attempt to revive the Greek drama.

Opera was and is known under the following heads:

Opera Seria	A serious or tragic opera.
Opera Buffa	A comedy in which the dialogue was carried on in "recitative secco."
Opera Semi-seria	A serious opera, with many comic episodes.
Grand Opéra (Fr.) }	An opera in which everything is sung to orchestra accompaniment.
Grosse Oper (Ger.) }	
Opéra Comique (Fr.) }	An opera in which the dialogue is spoken, and one in which the "ending" must be happy. (Not unlike the English ballad opera.)
Sing Spiel (Ger.) }	
Opéra Bouffe	A French comic opera of too light a character, and constructed on too trivial a plan, to entitle it to rank as an Opéra Comique.
Operetta	A work in which the forms of Grand Opera are imitated, the dialogue is spoken, and the purpose of the play is satirical. (Gilbert and Sullivan's operettas are excellent examples.)
Romantic Opera (Ger.)	Operas in which the plots are arranged from romantic tales of the Middle Ages. ("Oberon," Weber; "Euryanthe," Weber; "Freischütz," Weber, are examples.)
Comic Opera	An opera interspersed with light songs, dances, etc.
Opera di Camera	A short opera to be performed in a room.

Music Drama }	The name given by Richard Wagner to his later operas.
(Musikdramen) }	
Commedia Lirica }	This is what Verdi called his "Falstaff."
Lyric Comedy }	
Ballet	An artistic, as distinguished from a social, dance. A kind of opera in which there is not much plot, but a great deal of dancing. The representation of an action by pantomime and dancing.
French Opera	Places the text foremost, the dramatic movement next.
German Opera	Places the drama first, the music second.
Italian Opera	Places the voices and the art of singing first, and the drama second.

Opera. The birth of opera, Italian opera, is dated from about the year 1600. In 1597 the first opera, "Dafne," by Jacopo Peri, was privately performed in Florence. This opera was lost, but its success at the time was assured. In 1600 Peri's "Eurydice" was performed in public in Florence.

In England Henry Purcell (1658-'95) composed operas.

In France, "Pomone," by Cambert and Perrin, was the first opera performed in public, 1669; but the true founder of French opera was Giovanni Lulli (1633-1687).

In Germany, 1627, "Dafne," translated into German, and set to music by Schütz (1585-1672), was sung; but the real foundation of German opera is credited to Reinhard Keiser (1673-1739) in Hamburg.

The recitative and the aria are essential parts of an opera.

Recitative. Recitatives are either, (1) the *recitative secco*, in which there is no form except the text, the accompaniment usually played on a piano, and consisting only of a few chords; (2) the *recitative stromente*, accompanied throughout by the orchestra.

Aria. The aria is an air, a vocal composition for single voice, with instrumental accompaniment.

The different styles of aria were and are :

1. Aria cantabile ; slow, flowing, pathetic in style.

2. Aria di portamento ; with stronger rhythm and wider intervals.
3. Aria di mezzo carattere ; medium character.
4. Aria parlante ; declamatory.
5. Aria di bravoura ; displaying agility and florid execution.

An arietta is a short air or aria.

Ariosa signifies in the movement of an aria.

SOME FAMOUS OPERAS AND THEIR COMPOSERS

Auber: La Muette di Portici.

Beethoven: Fidelio.

Bellini: Norma, La Sonnambula.

Bizet: Carmen.

Debussy: Pelleas et Mélisande.

Donizetti: Lucia di Lammermoor, Don Pasquale.

Flotow: Martha.

Gluck: Orfeo.

Gounod: Faust, Romeo et Juliette.

Leoncavallo: I Pagliacci.

Mascagni: Cavalleria Rusticana.

Massenet: Le Cid, Thâïs, Le Jongleur de Notre Dame.

Meyerbeer: Les Huguenots, Le Prophète.

Mozart: Don Giovanni, Le Nozze di Figaro, Die Zauber flöte.

Puccini: La Bohème, Tosca, Madama Butterfly.

Rossini: Il Barbiere di Siviglia, William Tell.

Saint-Saëns: Samson et Dalila.

Strauss: Salomé, Elektra.

Thomas: Mignon, Hamlet.

Verdi: Aida, Otello, Rigoletto, La Traviata, Il Trovatore.

Wagner: Lohengrin, Tannhäuser, Die Meistersinger, Tristan und Isolde, Parsifal, the trilogy consisting of Rheingold, Die Walküre, Siegfried and Die Götterdämmerung (Music Dramas).

Weber: Der Freischütz, Oberon, Euryanthe.

CHAPTER XXVI.

ORATORIO.

Oratorio. An oratorio is a musical work on a Biblical subject, sung throughout by solo voices and chorus, to the accompaniment of a full orchestra.

It received its name from oratory or chapel, the place where these musical compositions with sacred subjects were first performed.

St. Philip Neri, founder of the congregation of the Oratory, introduced this art form. He induced the best Italian poets to write the libretto, and the best composers, including Palestrina, to compose the music.

The oratorio as known to-day dates from Händel, though the true father of modern oratorio is said to be Giacomo Carissimi.

The earlier oratorios were sung with the accessories of costume, acting, and scenery.

It was during Händel's time that these accessories were abolished by order of Dr. Gibson, Bishop of London.

NOTED ORATORIOS AND THEIR COMPOSERS.

Bach : Passion Music according to St. Matthew, Christmas Oratorio.

Elgar : Dream of Gerontius.

Handel : The Messiah, Samson, Judas Maccabeus.

Haydn : The Creation, The Seasons.

Mendelssohn : Elijah, St. Paul.

Piërné : The Children's Crusade

CHAPTER XXVII.

OTHER CLASSES.

Anthem. A vocal composition in sacred style, set to words that are generally taken from the Bible.

Cantata. Something sung. A vocal composition of some extent, with recitatives, arias, choruses. It is a name applied to short sacred works, or to secular works, as a lyric or a story not intended to be acted.

Ballad. In English, a simple song.

Madrigal. 16th century. (Of uncertain derivation.) 1. A short lyrical poem, pastoral, or amorous song of no fixed form. 2. A vocal composition in three, four, five, six, and rarely seven parts. Some claim its name to be derived from "Madre di Gala," Mother of the Feast, hymns in honor of the Virgin Mother.

Mass. A vocal work performed in Roman Catholic churches during the celebration of High Mass, and consisting of the Kyrie Eleison, the Gloria, the Credo, the Sanctus, the Benedictus, and the Agnus Dei.

Among the most celebrated masses are those by Palestrina, the famous mass in D by Beethoven, the great B minor mass by J. S. Bach, the mass in A by César Franck, the mass of St. Cecilia by Charles Gounod.

CHAPTER XXVIII.

SOME NATIONAL HYMNS.

United States. Star Spangled Banner. Music, Dr. Arnold ; words, Francis Scott Key.

England. Rule, Britannia, 1740, Dr. Arne. God Save the King, 1743, Henry Carey.

Austria. Gott erhalt Franz den Kaiser, 1797, Joseph Haydn.

Germany. Wacht am Rhein, 1854, Wilhelm. God Save the King (Heil dir im Siegerkranz), Carey: Deutschland, Deutschland über alles.

France. The Marseillaise, 1792, Rouget de Lisle.

Belgium. Brabanconne, 1830, Campenout.

Portugal. Hymno da carto, Dom Pedro IV.

Italy. Marcia Reale, 1834, Gabetti ; Garibaldi's Hymn.

Russia. Boje Tsare Krani, 1833, Lvoff.

Poland. Polish Hymn, 1863, Nikorowicz.

Greece. Hymn to Liberty, Solomos and Manzeros.

Mexico. Mexican Hymn, 1855. Music by Jaime Nuno ; words by Bocanegro.

Canada. The Maple Leaf.

Spain. Quien qui siera ser libre, Fenellosa.

Denmark. King Khristian, Ewald.

Wales. Men of Harlech.

Norway. National Hymn by R. Nordraak.

Sweden. Kong Karl.

Finland. Wartland. Frederick Pacius.

CHAPTER XXIX.

INSTRUMENTS.

MUSIC can be produced by *but* three classes of instruments,—wind instruments, stringed instruments, and instruments of percussion.

The human voice is classified under the head of wind instruments. It is the highest type.

That department of the science of music which treats of the compass, timbre, construction, mechanism, grouping, managing, and combining of instruments is called “Instrumentation”; sometimes “Orchestration.”

The different instruments used in modern music are the following:

Stringed Instruments,	{ strings played with a bow.	{ Violin. Viola. Viole d'Amour. Violoncello. Double Bass.
	{ strings plucked by the hand.	{ Harp. Guitar. Mandolin.
	{ with keys; strings struck by a hammer.	{ Pianoforte.
Wind Instruments,	{ open flues without reeds.	{ Flageolet. Flute. Piccolo. Clarinet.
	{ open flues with striking reeds.	{ Bassett Horn or Alto Clarinet. Bass Clarinet. Saxophone.

Wind Instruments continued,	open flues with double reed.	Human voice. Oboe. English Horn. Bassoon. Double Bassoon. Sarrusophone.
	flaring tubes, or tubes with bells, with mouthpiece.	Horn. Trumpet. Trombone. Tuba. Ophicleide. Clarion. Cornet. Bugle.

The organ has all varieties of pipes; open, stopped; with and without reeds.

Percussion Instruments,	definite pitch.	Tympani or Kettle Drums. Glöckenspiel, Carillon — Steel Bars. Xylophone — Wooden Bars. Ancient Cymbals. Tuning Fork. Large Bells or Chimes.
	indefinite pitch.	Large and Small Drums. Triangle. Tambourine. Castanets. Tam-tam or Gong. Cymbals.

There are various types of imitative instruments that need not be enumerated here.

Celesta. An instrument of comparatively recent invention, consisting of a series of tuning forks set in vibration by mallets actuated from a piano keyboard. The tone is of peculiar sweetness and is heard to charming effect in modern scores, notably in the "Nut Cracker" Suite of Tchaikovski.

	Usual Classification of Voices.	Usual Notation and Range.
Women.	High soprano.	
	Soprano.	
	Mezzo soprano.	
	Contralto.	
Men.	Lyric tenor.	
	Tenor robusto.	
	Baritone.	
	Basso cantante	
	Basso profundo.	

In Russia there is a voice cultivated and known as the contra basso. Its range sometimes extends to C below the bass staff.

Ancient and Mediæval Instruments.

The names of some of the instruments used by ancient nations and by mediæval nations are added now as a matter of interest. The

same classification of stringed instruments, wind instruments, and instruments of percussion holds good.

Chinese Instruments.

Of Percussion.	{	King (2200 B.C.)	A kind of harmonicon composed of sonorous slabs of stone called "yu."
		Kou	Drum.
		Te-tchung or piao	Square bell.
		Fang hiang	Wood harmonicon.
		Tchoung-tou	Made of bamboo; used for beating time.
Wind.	{	Bells	
		Huien	Made of earthenware; it gave five tones.
		Cheng	Twenty-four bamboo reeds in a hollowed out pumpkin; an important instrument.
		Yo	Flute type.
		Tsche	Flute type.
Stringed.	{	Siao	Pan-pipes.
		Kin	Primitive guitar form; four strings and inside bells.
		Ché	Table psaltery, nine feet long, twenty-five strings.
		Pepa	Lute.
		Cha chi	Similar to the kin, but having the chromatic scale.

Hindu Instruments.

Vina.	Resembled somewhat a guitar; a cylindrical tube, three feet long, with nineteen movable bridges, seven strings, and two hollow pumpkins.
Seringhi, or Serinda, or Serunda, or Suroda	A kind of violin.
Flute	
Chang	Harp.

Revanastron

Invented five thousand years ago by Revanon,
King of Ceylon.
Fiddle bow is said to have originated in Hindoo-
stan. Drums, bells, etc.

Egypt.

Harp (Buni), no front pillar. Lyres, Trumpets, Sistrum or Kemkem (called Sessesh). The sistrum was a clanging instrument, and consisted of bars of metal and movable pieces of metal. Cymbals, drums, double pipes (mam), small pipes, small flutes (Sébi), a kind of guitar (Nofra).

Assyria.

Kinnor, an Assyrian harp (played with a plectrum), Dulcimers, Double pipes or flutes, Lyres, Assyrian trumpets, Drums, Tambourines, Cymbals, Bells, Cylindrical drums.

Chaldea and Babylon.

Sambuca

Probably a stringed instrument.

Symphoneia

Sackbut, original of bagpipe.

Hebrews.

(Credited as the Most Musical People of the East.)

Kinnor

A Harp, triangular in shape } (Credited to
(David played the Kinnor). } Jubal.)

Ugab

Pipe.

Nebel

A kind of dulcimer.

Psanterin

A kind of dulcimer.

Asor

A ten-string instrument played with a plectrum.

Minor

Machalath }

Varieties of the lyre.

Nebel

Chalel }

Hebrew flute or pipes.

Nekel }

Mishrokitha

A small organ of seven pipes.

Sumphonia

A Bagpipe.

Magrepha

An Organ or kettledrum.

Keren

Shophar }

Trumpets.

Chatzozerah }

Toph	}	Hand drums.
Timbret		
Tabret		
Tzeltzelim	}	Cymbals.
Metzilloth		
Metzilthaim		
Menaaneim		Sistrum.
Phaamon		Little bells.
Shalisbim		Triangle.
Nechiloth		Flute.
Gettith	}	Stringed instruments.
Machalath		
Machol		Flute.

Arabs and Persians.

Rebab	}	Violin type and precursor of modern stringed instruments.
Kemangeh		
Nefyr		Trumpet.
L'End		Lute.
Tanbur		Lute.
Junk		Harp.
Kanoon	}	Dulcimers.
Santir		
Nay		Flute type.
Surnay		Oboe type.
Janissary music		Bells, drums, triangles, metal clappers, piccolos, oboes, etc.
Nei		A sort of flute, and a fashionable instrument with the Turks.

Greeks.

Lyres and Flutes.

Lyres	{	Lyra.
		Kithara.
		Chelys.
		Phorminx.

Other Stringed Instruments	{	Trigonom.	psalterion, pectis
		Magadis.	
		Barbiton.	
		Sambyke,	
		Nabla.	
		Pandoura.	
		Monochord.	

Aulos	Flute.
Syrinx	Pandean pipes.
Salpinx	Trumpet.
Keras	Brass horn.
Tympanon	Hand drum.
Kymbala	Cymbals.
Krotala	Resembled Castanets.

Rome.

Tibia	Double flute.
	Cithar and lyre.
Tubas and buccina	Wind instruments.
	Hydraulic organ.
Lyra, cithara, chelys, testuda, fides, cornu, barbitos, psalterium	{ Lyres.
Calamus	Pipe.
Syrinx } Fistula }	Pipes.
Tibia utricularis	Bagpipe.
Scabillum	Instrument of percussion.
Cymbalum	Cymbals.
Crotala and } Crismata }	Castanets.
Triangulum	Triangle.
Sistrum	
Tintinnabula	Metal bells in a frame.
Crepitaculum	Metal bells on a hoop.

Phenicia.

Lionedda } Launedda }	Bagpipe.
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Aztecs.

Pipes and flutes.

Pito	}	A kind of flageolet made of human bone.
Flute		

Mexico.

Cuyvi	A Pipe.
Huayllaca	A Flageolet.
Pincullu	A Flute.
Chayna	A Flute or kind of oboe.
Teponaztli	A Drum.
Agacaxtli	A Rattle.
Clarín	Tubes.
Huehuatl	A Drum.
Yotl	Bells.

Peru.

Huayra	}	Syrinx.
Puhura		
Flutes		Of human bone.
Tiniya		A Stringed instrument.
Huanca		A Drum.
Chhilchiles		Resembled a tambourine.

American (generally).

Rattles, drums, flutes, whistles, conch shells, trumpets, etc.

Middle Ages.

The *organistrum*, requiring two people to manipulate it, was used in the 8th century.

In France it was known as the *rubelle*, *symphonie*, or *chifonie*.

The *Rota* (*la rote* and *crout* in France, *crwth* in Wales, *cionar*, *cruit*, in Ireland) was used in the 9th century.

Cithara, 9th century.

Harps.

Fithele, or Anglo-Saxon fiddle, in the 11th century.

Lyra, or German fiddle, 12th and 13th centuries.

Monochord.

The Organ.

The hydraulic organ was known to the Israelites, Greeks, and Romans 200 B.C. Archimedes and Ctesibus, have each been credited with its invention.

The pneumatic organ was introduced in Rome about 350 A.D.

Organs were improved by the Byzantines in the 8th century.

Organs were introduced into France about 747.

Organs were introduced into Germany about 822.

Organs were introduced into England about the 11th century.

Pedals for organs were invented by Bernhard Mured, a German, who lived in Venice about 1470, though the invention now is said to have been in use before 1448.

Regals were portable organs.

Other Mediæval Instruments.

Among the other instruments recorded in use in the Middle Ages are flutes, syrinx, trumpets, sackbut, (sambuca, saquebutte), lutes, organs, regals, drums, cymbalum, triangles, tinnabulums, vielle, viols (11th century); citterns, bagpipes, clarions, rebecs, gitterns, shalm, waits (14th century); virginals, lutes, chanterelles, viol da gamba, treble, tenor and bass viols, recorders, bagpipes, bells, carillons.

In Russia: the Domra, the prototype of the mandolin, the gouli, a sort of horizontal harp, the svireli, a very elementary flute, and the balalaika, a triangular case, above which are extended three chords, which the hand causes to vibrate at one touch.

About Some Modern Instruments.

The Violin gained its final form in the early part of the 16th century in the hands of the Stradivarii.

The Flute is originally an ancient instrument. Its latest and best improvements were made by Theobald Boehm (1832).

The Oboe is an instrument of great antiquity, known under various names. Improvements in this instrument have been made

through applying the Boehm system. MM. Barret and Triebert, the French instrument makers, have also introduced improvements. The Oboe gives the tuning A to the orchestra.

The Clarinet, by some traced back to the mediæval shawm or schalmuse, by others claimed as an invention of Johannes Christopher Denner of Nuremburg about 1690, is in its name form a diminutive of Clarino, Italian for trumpet. Its construction has been improved by Stadler, Muller, and Klose (1843).

The Bassoon is also an instrument of antiquity, though by some it is credited to Afranio of Ferrara. Its name in English, "bassoon" "basson," indicates its pitch, it being the natural bass to the oboe, etc. Its German name, Fagott, Italian, Fagotto, comes from its resemblance to a faggot or bundle of sticks.

The Cornet in its present form is of comparatively modern construction.

The Horn (modern), brass, was introduced into the orchestra in France in 1757. Scarlatti and Lotti introduced it into Italy. It was first used in England in 1720. J. S. Bach used it in his scores.

The Trombone (sackbut) was originally invented by Tyrtæus, 685 B.C.

Charles Joseph Sax (1791–1865) and his son, Antoine Joseph Sax (Adolphe), improved many, and invented some wind instruments, notably the Sax Horn and the Saxophone.

Evolution of the Pianoforte.

In the evolution of the modern pianoforte the following steps are noted :

Monochord. Invented by Pythagoras, 580 (?)–500 (?) B.C. It consisted of an oblong box with one string stretched across it, with a movable bridge for stopping the string.

Keyboard. Devised (?) by Guido d'Arezza (born 995 A.D.).

Four-stringed Monochord. Is mentioned by Jean de Muris, 1323.

The Monochord (one string) after the 10th century had keys that divided the string by a metal pin, which struck the string at the

proper place. The pin held its place against the string until the finger released the key.

Hurdy Gurdy. In this instrument (used in the 10th century) bridges for stopping the strings were moved by a species of keyboard.

Clavichord. The clavichord was used during the 14th century and until the end of the 18th. It was often called *clavier* or *instrument*. It was arranged with *tangents*, or metal pins that divided the strings into two unequal parts, one of which was dampened, allowing the other to vibrate from the stroke of the tangent.

Harpsichord. (Ger. *Klavichord*, It. *Clavicembalo*, Fr. *Clavecin*.) First used toward the end of the 14th century. The harpsichord had *quills* which plucked the strings, therein differing from the clavichords, which had tangents.

Aricembalo. Invented during the 16th century. It had an enharmonic scale.

Spinet. When the harpsichords were made in the form of our square pianos (now obsolete), with strings arranged diagonally, they were called spinets after John Spinetus, the Venetian manufacturer.

Virginal. When the harpsichords were of smaller compass and in smaller cases, they were called virginals.

Clavicytherium (It. *Gravicembalo*, Ger. *Flügel*, Eng. *Concert Grand*). A harpsichord of large compass and grand piano form. The name was most commonly applied to the harpsichord made in upright form, bearing some resemblance to our modern upright piano.

The mechanism of the harpsichord was more complicated than that of the clavichord, as it was necessary to provide for a so-called escapement (to allow the release of a lever) and for a separate damper for each string. This second difficulty suggested the invention of the damper pedal.

Pianoforte. (*Hammer-Clavier*.) This instrument was first made and exhibited by Bartolomeo Cristofori in 1711. The strings were no longer plucked but were struck by hammers. Three others, Gottfried Silbermann, C. G. Schröter and Marius, a Frenchman, also claimed first credit for the invention.

The first square piano is said to have been made by Frederici of Gera.

In 1766 Johannes Zumpe built square pianos in England.

Improvements in the construction of pianos were made by John Andrew Stein (1728); Augsburg; Sebastian Erard, Paris, 1823; and Johann Andreas Streicher in Vienna; Johann Heinrich Pape, Paris, 1815; William Steinway, New York.

The modern pedal device was patented by John Broadwood, 1783, Alpheus Babcock of Boston, F. W. Bechstein of Berlin.

The upright piano was patented in 1800 by John Isaac Hawkins of Philadelphia.

The first American grand piano was made in 1828 by Jonas Chickering.

The Doppelflügel, or double grand piano, had a keyboard at both ends.

Modern Organs.

Modern organs have enlisted the ingenuity and skill of organ builders, and all the devices of pneumatics and electricity have been used to make the organ of to-day really a modern orchestra and to reduce to a minimum mechanical difficulties. As an example of the size and completeness of modern organs, the following specifications of a modern American organ is given. This is the organ in Woolsey Hall Auditorium in Yale University.

Compass of Manuals from C to C, 61 notes.

Compass of Pedals from C to G, 32 notes.

GREAT ORGAN.

1.	16 ft. Diapason	metal 61 pipes
2.	16 ft. Quintaton	wood 61 "
3.	8 ft. Diapason	metal 61 "
4.	8 ft. Diapason	" 61 "
5.	8 ft. Diapason	" 61 "
6.	8 ft. Doppelflöte	wood 61 "
7.	8 ft. Principal Flute	" 61 "
8.	8 ft. Gross Gamba	metal 61 "
9.	8 ft. Viol d'Amour	" 61 "
10.	8 ft. Gemshorn	" 61 "
11.	4 ft. Octave	metal 61 "
12.	4 ft. Waldflöte	wood 61 "
13.	4 ft. Gambette	metal 61 "

14.	2 ft. Twelfth	metal 61 pipes
15.	2 ft. Fifteenth	" 61 "
16.	Five Rks. Mixture	" 305 "
17.	16 ft. Trumpet	" 51 "
18.	8 ft. Trumpet	" 61 "
19.	4 ft. Clarion	" 61 "

SWELL ORGAN.

20.	16 ft. Contra Gamba	metal 61 pipes
21.	16 ft. Bourdon	wood 61 "
22.	8 ft. Stentorphone	metal 61 "
23.	8 ft. Diapason	" 61 "
24.	8 ft. Gamba	" 61 "
25.	8 ft. Bourdon	wood 61 "
26.	8 ft. Flauto Traverso	" 61 "
27.	8 ft. Salicional	metal 61 "
28.	8 ft. Quintadena	" 61 "
29.	8 ft. Unda Maris	" 61 "
30.	8 ft. Æoline	" 61 "
31.	8 ft. Vox Celestis	" 61 "
32.	4 ft. Harmonic Flute	" 61 "
33.	4 ft. Principal	" 61 "
34.	4 ft. Violina	" 61 "
35.	2 ft. Flautino	" 61 "
36.	Five Rks. Dulce Cornet	" 305 "
37.	16 ft. Posaune	" 61 "
38.	8 ft. Cornopean	" 61 "
39.	8 ft. Oboe	" 61 "
40.	8 ft. Vox Humana	" 61 "
	Tremolo	

CHOIR ORGAN.

(Inclosed in a swell-box.)

41.	16 ft. Contra Dulciana	metal 61 pipes
42.	8 ft. Diapason	" 61 "
43.	8 ft. Melodia	wood 61 "
44.	8 ft. Viol d'orchestre	metal 61 "
45.	8 ft. Lieblich Gedacht	wood 61 "
46.	8 ft. Dulciana	metal 61 "
47.	8 ft. Viol Celeste 2 Ranks	" 122 "
48.	8 ft. Violoncello	wood 61 "
49.	4 ft. Viola	metal 61 "
50.	4 ft. Flauto Traverso	wood 61 "

51.	2 ft. Piccolo Harmonique.....	metal	61	pipes
52.	8 ft. Clarinet.....	"	61	"
53.	16 ft. Contra Fagotto.....	"	61	"
	Tremolo.			

SOLO ORGAN.

(In a swell-box.)

54.	8 ft. Tibia Plena.....	metal	61	"
55.	8 ft. Tuba Sonoro.....	"	61	"
56.	8 ft. Gross Flute.....	"	61	"
57.	4 ft. Hohlpipeife.....	wood and metal	61	"
58.	8 ft. Dolce.....	metal	61	"
59.	8 ft. Orchestral Oboe.....	"	61	"

PEDAL ORGAN (*Augmented*).

60.	64 ft. Gravissima (Resultant).....	wood	32	pipes
61.	32 ft. Diapason.....	"	32	"
62.	32 ft. Contra Bourdon.....	"	32	"
63.	32 ft. Contra Bass (Resultant).....	"	32	"
64.	16 ft. Diapason.....	"	32	"
65.	16 ft. Diapason.....	metal	32	"
66.	16 ft. Violone.....	wood	32	"
67.	16 ft. Bourdon.....	"	32	"
68.	16 ft. Dulciana.....	metal	32	"
69.	16 ft. Lieblich Gedacht.....	wood	32	"
70.	16 ft. Bombarde.....	metal	32	"
71.	16 ft. Contra Fagotto.....	"	32	"
72.	8 ft. Bass flute.....	wood	32	"
73.	8 ft. Octave.....	metal	32	"
74.	8 ft. Violoncello.....	wood and metal	32	"
75.	8 ft. Bourdon.....	wood	32	"
76.	8 ft. Tromba.....	metal	32	"
77.	4 ft. Super Octave.....	"	32	"
78.	4 ft. Flute.....	wood	32	"

COUPLERS.

79.	Great to Pedal,	}	Pedal.
80.	Swell to Pedal,		
81.	Choir to Pedal,		
82.	Solo to Pedal,		
83.	Swell to Great,	}	Unison.
84.	Choir to Great,		
85.	Solo to Great,		
86.	Swell to Choir,		
87.	Swell to Solo,		

61 pipes	88. Great to Great, 16	}	Sub 8vo.
61 "	89. Swell to Swell, 16		
61 "	90. Solo to Solo, 16		
	91. Swell to Great, 16		
	92. Choir to Great, 16		
	93. Solo to Great, 16	}	Super 8vo.
61 "	94. Great to Great, 4		
51 "	95. Swell to Swell, 4		
51 "	96. Solo to Solo, 4		
51 "	97. Swell to Great, 4		
51 "	98. Solo to Great, 4		

ADJUSTABLE COMBINATIONS.

(Push buttons between manuals.)

1, 2, 3, 4, 5, 0,	Operating on Great and Pedal.
1, 2, 3, 4, 5, 6, 0,	" " Swell "
1, 2, 3, 4, 0	" " Choir "
1, 2, 3, 4, 0	" " Solo "
1, 2, 3, 4	" " such stops as are desired.

General Release.

Pedal " .

PEDAL.

1, 2, 3	Combinations on Great.
4, 5, 6	" " Swell.
7, 8	" " Choir.
9, 10	" " Solo.
11	Great to Pedal Reversible.
12	Swell " " "
13	Sforzando (Full Organ).
14	Balanced Swell.
15	" Choir.
16	" Solo.
17	" Crescendo.

Electro-pneumatic Action.

CHAPTER XXX.

ORCHESTRA, BAND.

At the present time the use of the terms "orchestra" and "band" are used to indicate :

Band — a body of wind instruments and some instruments of percussion.

Orchestra — a body of instruments, the bulk being stringed instruments, with a certain proportion of wind instruments and percussion instruments.

As examples the New York Symphony Orchestra, Walter Damrosch, conductor, in 1908-9 consisted of :

34 violins	2 flutes	3 bassoons	1 tuba
12 violas	1 piccolo	1 contra bassoon	5 percussion
12 cellos	2 oboes	4 horns	
10 basses	1 English horn	4 trumpets	
1 harp	3 clarinets	3 trombones	

The Boston Symphony Orchestra, Max Fiedler, conductor, '08-'09, consisted of :

30 violins	4 flutes	1 bass clarinet	4 trumpets
10 violas	3 oboes	3 bassoons	8 trombones
10 cellos	1 English horn	1 contra bassoon	1 tuba
8 basses	3 clarinets	8 horns	1 harp

2 tympani, and 4 other percussion.

The great orchestra for the New York Festival of 1882, Theodore Thomas, conductor, consisted of :

50 first violins	6 flutes	6 bassoons	1 bass trumpet
50 second violins	2 piccolos	2 contra bassoons	9 trombones
36 violas	7 oboes	9 horns	3 tubas
36 violoncellos	2 English horns	2 Saxhorns	4 pairs kettledrums
40 double basses	6 clarinets	11 cornets	2 bass drums
6 harps	2 bass clarinets	3 trumpets	cymbals, triangles, small drums

The Philharmonic Society of New York, Wassily Safonoff, conductor, during season 1908-09 (its 67th season, and its last as a co-operative society), consisted of :

18 first violins	3 flutes	1 bass clarinet	3 trombones
16 second violins	1 piccolo	3 bassoons	1 tuba
14 violas	3 oboes	1 contra-bassoon	1 kettle drum
12 violoncellos	1 English horn	6 horns	1 bass drum
12 basses	3 clarinets	3 trumpets	2 harps

The Havana Municipal Police Band, Capt. Tomas, leader, in 1901 consisted of the following :

1 piccolo	2 baritone saxophones	2 cornophones
2 flutes	2 sarrusophones	2 baritones
2 E \flat clarinets	2 bassoons	2 euphoniums
2 C clarinets	2 flügelhorns	2 basses
10 B \flat clarinets	4 cornets	2 tubas
2 oboes	2 trumpets	1 bass drum
1 soprano saxophone	4 trombones	1 snare drum
2 alto saxophones	1 bass trombone	1 Prussian drum
2 tenor saxophones	2 French horns	cymbals and kettledrums

John Philip Sousa's band, '01-'02, consisted of :

4 flutes and piccolos	2 sarrusophones	2 euphoniums
12 B \flat clarinets	4 saxophones	4 tubas
1 E \flat clarinet	4 cornets	1 small drum
1 alto clarinet	2 trumpets	1 bass drum
1 bass clarinet	1 flügelhorn	1 tympani
2 oboes	4 horns	
2 bassoons	4 trombones	

NOTED NAMES IN MUSIC.

COMPOSERS, PERFORMERS, AND LITTERATEURS.

- Abt, Franz.** Eilenburg, 1819; Wiesbaden, 1885. Song composer.
- Adam, Adolphe-Charles.** Paris, 1802-1856. Light operas.
- Alard, Jean-Delphin.** Bayonne, 1815; Paris, 1888. Violinist.
- Albani, Emma.** nr. Montreal, 1852. Soprano.
- d'Albert, Eugen.** Glasgow, 1864. Pianist and composer.
- Alberti, Domenico.** Venice, 1707; Formio, 1740. Composer. Invented "Alberti bass."
- Albrechtsberger, Johann Georg.** nr. Vienna, 1736; Vienna, 1809. Contrapuntist, composer, organist.
- Aldrich, Richard.** Providence, R. I., 1863. Litterateur and critic.
- Alkan, Charles-Henri-Valentin.** Paris, 1813-1888. Pianist and teacher.
- Allegri, Gregorio.** Rome, 1584-1662. Composer.
- Amati, Niccolò.** Cremona, 1596-1684. Violin maker.
- Apthorp, Wm. Foster.** Boston, 1848. Litterateur and music critic.
- Arcadelt, Jacob.** — ? 1514 ?; Paris, 1570-5 ? Flemish composer.
- Arditi, Luigi.** Crescentino, 1822; nr. Brighton, Eng., 1903. Opera conductor, composer.
- Arenski, Anton Stepanovitch.** Nijni-Novgorod, 1861; Finland, 1906. Russian pianist and composer.
- Arne, Dr. Thomas Augustine.** London, 1710-1778. Composer.
- Artchiboucheff, Nicholas V.** Tsarskoe-Sielo, 1858. Russian pianist and composer.
- d'Astorga, Emmanuele, Baron.** Palermo, 1681; Prague, 1736. Church composer.
- Auber, Daniel-François-Esprit.** Caen, 1782; Paris, 1871. Opera composer.
- Audran, Edmond.** Lyons, 1842; Tierceville, 1901. Light operas.
- Bach family.** Noted family of musicians. From 1550 to 1850. (About 400 Bachs are recorded.)
- Bach, Karl Philipp Emanuel.** Weimar, 1714; Hamburg, 1788. Third son of J. S. Bach. Composer.
- Bach, Johann Sebastian.** Eisenach, 1685; Leipzig, 1750. Composer.
- Backer-Gründahl, Agathe.** Christiania, 1847-1908. Pianist and composer.
- Balakirev, Mill A.** Nijni-Novgorod, 1836. Russian composer.
- Balfe, Michael William.** Dublin, 1808; Rowney Abbey, 1870. Opera composer.
- Baltzell, W. J.** Shiremanstown, Pa., 1864. Litterateur.
- Bartlett, Homer N.** Olive, N. Y., 1845. Pianist and composer.
- Bantock, Granville.** London, 1868. Composer and conductor.
- Bargiel, Woldemar.** Berlin, 1828-1897. Composer and teacher.
- Barnby, Sir Joseph.** York, 1838; London, 1896. Organist and composer.
- Bauer, Harold.** London, 1873. Pianist.
- Beach, Mrs. H. H. A.** Henniker, N. H., 1867. Pianist and composer.
- Beethoven, Ludwig van.** Bonn, 1770; Vienna, 1827. Composer.
- Behr, Franz.** Lüththeen, 1837; Dresden, 1898. Salon composer.
- Bellini, Vincenzo.** Catania, Sicily, 1801; Paris, 1835. Opera composer.
- Bemberg, Hermann.** Buenos Ayres, 1861. Opera and song composer.
- Bendel, Franz.** Bohemia, 1833; Berlin, 1874. Pianist and composer.
- Benedict, Sir Julius.** Stuttgart, 1804; London, 1885. Composer.
- Bennett, Sir Wm. Sterndale.** Sheffield, 1816; London, 1875. Composer.
- Benoît, Pierre-Léonard-Léopold.** Harlebeke, Flanders, 1834; Antwerp, 1901. Flemish composer.
- Bériot, Charles de.** Louvain, 1802; Brussels, 1870. Violinist.

- Berlioz, Hector.** La Côte-St.-André, 1803; Paris, 1869. Composer and critic.
- Bertini, Henri.** London, 1798; nr. Grenoble, 1876. Pianist and composer.
- Best, Wm. Thomas.** Carlisle, 1826; London, 1897. Organist and composer.
- Bishop, Sir Henry Rowley.** London, 1756-1855. Composer.
- Bizet, Georges.** Paris, 1838; Bougival, 1875. Opera composer.
- Blockx, Jan.** Antwerp, 1851. Pianist and composer.
- Bloomfield-Zeisler, Fanny.** Austria, 1866. Pianist.
- Blow, Dr. John.** Nottinghamshire, 1648; London, 1708. Composer.
- Blumenthal, Jacques.** Hamburg, 1829; London, 1908. Song composer.
- Boccherini, Luigi.** Lucca, 1740; Madrid, 1806. Composer and 'cellist.
- Bochsa, Robert N. C.** Montmédy, 1789; Sydney, 1855. Harpist.
- Boëllmann, Leon.** Ensisheim, 1862; Paris, 1897. Organist and composer.
- Bohm, Carl.** Berlin, 1844. Pianist and salon composer.
- Boieldieu, François-Adrien.** Rouen, 1775; Jarcy, 1834. Opera composer.
- Boise, Otis B.** Oberlin, O., 1845. Composer and theorist.
- Boito, Arrigo.** Padua, 1842. Composer and poet.
- Bononcini, Giovanni.** Modena, 1660; Venice (?), 1750 (?). Opera composer.
- Bordogni, Giulio Marco.** nr. Bergamo, 1788; Paris, 1856. Tenor and singing master.
- Borodin, Alexander P.** St. Petersburg, 1834-1887. Composer.
- Bortolansky, Dimitri.** Gluchov, 1752; St. Petersburg, 1825. Composer.
- Bossi, Marco Enrico.** Brescia, 1861. Organist and composer.
- Bottesini, Giovanni.** Lombardy, 1823; Parma, 1889. Double-bass virtuoso.
- Bouval, Jules Henri.** Toulouse, 1867. Composer.
- Brahms, Johannes.** Hamburg, 1833; Vienna, 1897. Composer.
- Brassin, Louis.** Aix-la-Chapelle, 1840; St. Petersburg, 1884. Pianist and composer.
- Bridge, Sir John Frederick.** Oldburg, 1844. English organist and church composer.
- Brockway, Howard A.** Brooklyn, N. Y., 1870. Pianist and composer.
- Bruch, Max.** Cologne, 1838. Composer.
- Bruckner, Anton.** Ansfelden, 1824; Vienna, 1896. Symphonic composer.
- Brüll, Ignaz.** Moravia, 1846. Pianist and composer.
- Bruneau, Alfred.** Paris, 1857. Opera composer.
- Buck, Dudley.** Hartford, Conn., 1839. Organist and composer.
- Bull, Dr. John.** Somersetshire, 1562(?); Antwerp, 1628. Organist and composer.
- Bull, Ole.** Bergen, 1810-1880. Norwegian violinist.
- Bullard, Frederic Field.** Boston, 1864-1904. Composer.
- Bülow, Hans von.** Dresden, 1830; Cairo, 1894. Pianist, conductor, composer.
- Busch, Carl.** Bjerre, Denmark, 1862. Composer and conductor.
- Bungert, August.** Mühlheim, 1846. Opera composer.
- Buonamici, Giuseppe.** Florence, 1846. Pianist and conductor.
- Busoni, Ferruccio B.** Florence, 1866. Pianist and composer.
- Buxtehude, Dietrich.** Helsingör, 1639; Lübeck, 1707. Organist and composer.
- Byrd, William.** London, 1538(?); 1623. Organist and composer.
- Caccini, Giulio.** Rome, 1558 (?); Florence, 1615 (?). With Peri, he wrote the first operas.
- Calkin, John Baptiste.** London, 1827; 1905. Organist and composer.
- Calvé, Emma.** Madrid, 1864. Dramatic soprano.
- Cambert, Robert.** Paris, 1628 (?); London, 1677. First French opera composer.
- Campra, André.** Aix, 1660; Versailles, 1744. Opera composer.
- Carissimi, Giacomo.** nr. Rome, 1604; Rome, 1674. Church composer.
- Carl, William C.** Bloomfield, N. J. 1865. Organist.
- Carreño, Teresa.** Venezuela, 1853. Pianist.
- Caruso, Enrico.** Naples, 1874. Dramatic tenor.
- Chabrier, Alexis Emmanuel.** Aubert, 1841; Paris, 1894. Composer.
- Chadwick, George Whitfield.** Lowell, Mass., 1854. Composer and organist.
- Chaminade, Cécile.** Paris, 1861. Composer.
- Charpentier, Gustave.** Dieuze, Lorraine, 1860. Composer.
- Chausson, Ernest.** Paris, 1855; Limaz, 1899. Composer.

- Cherubini, Luigi.** Florence, 1760; Paris, 1842. Composer.
- Chopin, Frédéric.** Zelazowa-Wola, Poland, 1809; Paris, 1849. Pianist, composer.
- Cimarosa, Domenico.** nr. Naples, 1749; Venice, 1801. Composer.
- Clementi, Muzio.** Rome, 1752; London, 1832. Pianist, teacher, publisher and piano-maker.
- Clough-Leigher, H.** Washington, D. C., 1874. Composer.
- Coerne, Louis Adolf.** Newark, N. J., 1870. Composer.
- Coleridge-Taylor, Samuel.** London, 1875. First eminent composer of African descent.
- Colonne, Edouard.** Bordeaux, 1838. Conductor.
- Concone, Giuseppe.** Turin, 1810 (?) - 1861. Singing master and composer.
- Converse, Frederick S.** Newton, Mass., 1871. Composer.
- Coquard, Arthur.** Paris, 1846. Composer.
- Corelli, Arcangelo.** Fusignano, Italy, 1653; Rome, 1713. Violinist and composer.
- Cornelius, Peter.** Mayence, 1824-1874. Composer.
- Costa, Sir Michael.** Naples, 1810 (?) ; Brighton, 1884. Conductor and composer.
- Couperin, François.** Paris, 1668-1733. Composer.
- Cowen, Frederic Hymen.** Kingston, Jamaica, 1852. English composer.
- Cramer, Johann Baptist.** Mannheim, 1771; London, 1858. Pianist, composer and teacher.
- Cristofori, Bartolommeo.** Padua, 1653; Florence, 1731. Inventor of the piano-forte, 1709-11.
- Cui, César Antonovitch.** Vilna, 1835. Russian composer.
- Curwen, Rev. John.** Heckmondwike, Eng., 1816; nr. Manchester, 1880. Tonic Sol-fa system.
- Czerny, Carl.** Vienna, 1791-1857. Pianist, teacher and composer.
- Daleroze, Jacques Emile.** Vienna, 1865. Swiss composer.
- Damrosch, Frank.** Breslau, 1859. Conductor.
- Damrosch, Leopold.** Posen, 1832; New York, 1885. Violinist and conductor.
- Damrosch, Walter.** Breslau, 1862. Conductor, composer.
- Dancia, Charles.** Bagnères-de-Bigorre, 1818; Tunis, 1907. Violinist and composer.
- Dargomizski, Alexander S.** Toula, 1813; St. Petersburg, 1869. Opera composer.
- David, Félicien.** Cadenet, 1810; St. Germain, 1876. French composer.
- David, Ferdinand.** Hamburg, 1810; nr. Klosters, 1873. Violinist and teacher.
- Davidov, Charles.** Goldingen, 1838; Moscow, 1889. Cellist and composer.
- Debussy, Achille Claude.** St. Germain-en-Laye, 1862. Composer.
- De Koven, Reginald.** Middletown, Conn., 1859. Operetta composer.
- Dellbes, Léo.** St. Germain-du-Val, 1836; Paris, 1891. Composer.
- De Reszké, Jean.** Warsaw, 1852. Dramatic tenor.
- Després, Josquin.** Burgundy, 1450 (?) - 1521. Singer and composer. Regarded as the greatest of his period.
- Diabelli, Antonio.** Mattsee, 1781; Vienna, 1858. Composer.
- Dlenel, Otto.** Silesia, 1839. German organist and composer.
- Dittersdorf, Karl Ditters von.** Vienna, 1739; Rothlotta, 1799. Composer and violinist.
- Döhler, Theodor.** Naples, 1814; Florence, 1856. Pianist and composer.
- Dohnányi, Ernest von.** Pressburg, 1877. Hungarian pianist and composer.
- Dontzetti, Gaetano.** Bergamo, 1797 (?) - 1848. Opera composer.
- Draeseke, Felix.** Coburg, 1835. Composer and teacher.
- Dreyschock, Alexander.** Zack, Bohemia, 1818; Venice, 1869. Pianist.
- Dubols, Théodore.** Rosnay, 1837. Organist and composer.
- Dufay, Guillermus.** 1400 (?) - 1474. Singer, organist and composer. Father of the Gallo-Belgic school.
- Dukas, Paul.** Paris, 1865. Composer.
- Dunstable, John.** Dunstable(?) , 1400(?) ; Walbrook, 1453. English composer.
- Duparc, Henri.** Paris, 1848. Composer.
- Durante, Francesco.** Naples, 1684-1755. Founder of the Neapolitan School.
- Dussek, Johann.** Bohemia, 1761; St. Germain-en-Laye, 1812. Pianist and composer.
- Dvořák, Antonín.** Mühlhausen, 1841; Prague, 1904. Bohemian composer.
- Dwight, John Sullivan.** Boston, 1813-1893. Music critic and litterateur.
- Eames, Emma.** Shanghai, China, 1867. Dramatic soprano.
- Eddy, Clarence.** Greenfield, Mass., 1851. Organist.

- Ehlert, Louis.** Königsberg, 1825; Wiesbaden, 1884. Critic, litterateur and composer.
- Ehrlich, Alfred Heinrich.** Vienna, 1822; Berlin, 1899. Pianist, critic and litterateur.
- Elgar, Sir Edward.** Broadheath, 1857. Composer.
- Elson, Louis C.** Boston, 1848. Critic and litterateur.
- Elvey, Sir George.** Canterbury, 1816; Windlesham, 1893. Organist and composer.
- Enna, August.** Nakskov, Denmark, 1860. Composer.
- Erard, Sébastien.** Strassburg, 1752; Paris, 1831. Invented the repeating action of the piano and double action harp.
- Ernst, Heinrich Wilhelm.** Brünn, 1814; Nice, 1865. Violinist.
- Farwell, Arthur.** St. Paul, Minn., 1872. Composer.
- Faulkes, William.** Liverpool, 1863. Organist and composer.
- Fauré, Gabriel Urbain.** Pamiers, 1845. Composer.
- Fétils, François-Joseph.** Mons, 1784; Brussels, 1871. Belgian music historian and litterateur.
- Fibich, Zdenko.** Bohemia, 1850; Prague, 1900. Bohemian composer.
- Field, John.** Dublin, 1782; Moscow, 1837. Pianist, composer. Created the Nocturne.
- Florillo, Federico.** Brunswick, 1753; Paris (?), 1823 (?). Violinist and composer.
- Fleitz, Alexander von.** Leipsic, 1860. Composer.
- Finck, Henry T.** Bethel, Mo., 1854. Critic and litterateur.
- Fisher, Wm. Arms.** San Francisco, 1861. Composer.
- Flotow, Friedrich von.** Mecklenburg, 1812; Darmstadt, 1883. Composer.
- Foerster, Adolph Martin.** Pittsburg, Pa., 1854. Composer.
- Foote, Arthur Wm.** Salem, Mass., 1853. Organist and composer.
- Foster, Stephen Collins.** Pittsburg, 1826; New York, 1864. Song composer.
- Franchetti, Alberto.** Turin, 1860. Opera composer.
- Franck, César-Auguste.** Liège, 1822; Paris, 1890. Composer "Les Beattitudes."
- Franz, Robert.** Halle, 1815-1892. Song composer.
- Frescobaldi, Girolamo.** Ferrara, 1583; Rome, 1644. Organist.
- Friedheim, Arthur.** St. Petersburg, 1859. Pianist.
- Gabrilovitch, Ossip S.** St. Petersburg, 1878. Pianist.
- Gade, Niels Wilhelm.** Copenhagen, 1817-1890. Composer.
- Gadski, Johanna.** Anclam, Pomerania, 1871. Dramatic soprano.
- Garcia, Manuel.** Madrid, 1805; London, 1906. Vocal teacher. Invented the laryngoscope.
- Gaul, Alfred Robert.** Norwich, Eng., 1837. Composer.
- Gérardy, Jean.** Spa, Belgium, 1877. Cellist.
- Gericke, Wilhelm.** Graz, 1845. Conductor.
- German, Edward.** Whitchurch, Eng., 1862. Composer.
- Gevaert, François-Auguste.** Huyse, 1828; Brussels, 1908. Composer, theorist and historian of music.
- Gibbons, Orlando.** Cambridge, 1583; Canterbury, 1625. Composer.
- Gigout, Eugène.** Nancy, 1844. Organist and composer.
- Gilchrist, Wm. Wallace.** Jersey City, 1846. Composer.
- Gilman, Lawrence.** Flushing, N. Y., 1878. Litterateur.
- Gilson, Paul.** Brussels, 1865. Composer.
- Giordani, Giuseppe.** Naples, 1744; Fermo, 1798. Composer.
- Giordano, Umberto.** Foggia, 1867. Opera composer.
- Glazounov, Alexander.** St. Petersburg, 1865. Composer.
- Glinka, Michael Ivanovich.** Novospaskoi, 1803; Berlin, 1857. Composer.
- Gluck, Christoph Willibald von.** Weidenwang, 1714; Vienna, 1787. Opera composer.
- Godard, Benjamin.** Paris, 1849; Cannes, 1895. Opera composer.
- Godowski, Leopold.** Wilna, Russ, Poland, 1870. Pianist.
- Goetschius, Percy.** Paterson, N. J., 1853. Theorist.
- Goetz, Hermann.** Königsberg, 1840; nr. Zürich, 1876. Composer.
- Goldmark, Carl.** Hungary, 1830. Composer.
- Goldmark, Rubin.** New York, 1872. Composer.
- Goltermann, Georg Eduard.** Hanover, 1824; Frankfurt-a.-M., 1898. Cellist and composer.
- Gomes, Antonio Carlos.** Campinas, Brazil, 1839; Para, 1896. Opera composer.

- Goodrich, J. Wallace.** Newton, Mass., 1871. Organist and conductor.
- Goss, Sir John.** Fareham, Eng., 1800; London, 1880. Organist and composer.
- Gottschalk, Louis Moreau.** New Orleans, 1829; Rio Janeiro, 1869. Pianist and composer.
- Gounod, Charles.** Paris, 1818-1893. Opera composer.
- Graun, Carl Heinrich.** Wahrenbrück, 1701; Berlin, 1759. Opera and church composer.
- Grétry, A. E. M.** Liège, 1741; Paris, 1813. Opera composer.
- Grieg, Edvard Hagerup.** Bergen, 1843; Christiania, 1907. Norwegian composer.
- Grove, Sir George.** Clapham, Eng., 1820; London, 1900. Writer on music.
- Guarnerius.** Cremona, 17th and 18th centuries. Violin makers.
- Guido, d'Arezzo.** Arezzo, 995 (?); Avellano, 1050 (?). Reformer of music notation.
- Gullmant, Alexandre.** Boulogne, 1837. Organist and composer.
- Guiraud, Ernest.** New Orleans, 1837; Paris, 1892. Composer.
- Hadley, Henry K.** Somerville, Mass., 1871. Composer.
- Hahn, Reynaldo.** Venezuela, 1874. Composer.
- Hale, Philip.** Norwich, Vermont, 1854. Litterateur and critic.
- Halévy, J. F. F. E.** Paris, 1799; Nice, 1862. Opera composer.
- Hallé, Sir Charles.** Hagen, 1819; Manchester, 1895. Pianist and conductor.
- Handel, George Frideric.** Halle, 1685; London, 1759. Composer.
- Harris, Victor.** New York, 1869. Song composer.
- Hanslick, Eduard.** Prague, 1825; Vienna, 1904. Music critic and litterateur.
- Hasse, Johann Adolph.** nr. Hamburg, 1699; Venice, 1783. Opera composer.
- d'Hardelet, Guy (Mrs. Rhodes).** nr. Boulogne. Song composer.
- Hauptmann, Moritz.** Dresden, 1792; Leipzig, 1868. Composer and theorist.
- Hausegger, Sigmund von.** Graz, Austria, 1872. Composer.
- Hawkins, Sir John.** London, 1719-1789. Music historian.
- Haydn, Franz Joseph.** Rohrau, 1732; Vienna, 1809. Composer.
- Heller, Stephen.** Pesth, 1815; Paris, 1888. Pianist and composer.
- Henderson, Wm. James.** Newark, N. J., 1855. Music critic and litterateur.
- Henschel, Georg.** Breslau, 1850. Singer, conductor and composer.
- Henselt, Adolf von.** Bavaria, 1814; Warmbrunn, Silesia, 1889. Pianist, composer.
- Herbert, Victor.** Dublin, 1859. Composer and 'cellist.
- Hérolf, Louis J. F.** Paris, 1791-1833. Opera composer.
- Herz, Henri.** Vienna, 1806; Paris, 1888. Pianist.
- Hesse, Adolph Friedrich.** Breslau, 1809-1863. Organist and composer.
- Hildach, Eugene.** Mittenberger, 1849. Composer.
- Hiller, Ferdinand von.** Frankfort, 1811; Cologne, 1885. Composer.
- Hoffman, Richard.** Manchester, Eng., 1831. Pianist.
- Hofmann, Heinrich.** Berlin, 1842; Gross-Tabarz, 1902. Composer.
- Hofmann, Josef.** Cracow, 1877. Pianist.
- Hollins, Alfred.** Hull, Eng., 1865. Organist (blind), composer.
- Holmes, Augusta Mary Ann.** (Irish parents.) Paris, 1847-1903. Composer.
- Hopekirk, Helen.** Edinburgh, 1856; Pianist and composer.
- Huber, Hans.** nr. Olten, Switz., 1852. Composer.
- Huc, Georges A.** Versailles, 1858. Composer.
- Hummel, Johann Nepomuk.** Pressburg, 1778; Weimar, 1837. Pianist and composer.
- Humperdinck, Engelbert.** nr. Bonn, 1854. Composer.
- Huneker, James Gibbons.** Philadelphia, 1860. Litterateur and critic.
- Hüntten, Franz.** Koblenz, 1793-1878. Composer.
- Huss, Henry Holden.** Newark, N. J., 1862. Composer.
- Hyatt, Nathaniel Irving.** Lansingburgh, N. Y., 1865. Composer.
- d'Indy, Vincent.** Paris, 1851. Composer.
- Jadassohn, Salomon.** Breslau, 1831; Leipzig, 1902. Teacher and composer.
- Jaell, Alfred.** Trieste, 1832; Paris, 1882. Pianist and composer.
- Jensen, Adolph.** Königsberg, 1837; Baden-Baden, 1879. Composer.
- Joachim, Joseph.** nr. Pressburg, Hungary, 1831; Berlin, 1907. Violinist.
- Johns, Clayton.** Newcastle, Del., 1857. Pianist and composer.

- Jommelli, Nicola.** nr. Naples, 1714-1774. Composer
- Joseffy, Rafael.** Hungary, 1853. Pianist.
- Kalkbrenner, Friedrich.** Germany, 1788; nr. Paris, 1849. Pianist and composer.
- Karganov, Genari.** Caucasus, 1858-1890. Russian composer.
- Kaun, Hugo.** Berlin, 1863. Composer.
- Kelley, Edgar Stillman.** Sparta, Wisconsin, 1857. Composer.
- Kiel, Friedrich.** Puderbach, 1821; Berlin, 1885. Composer.
- Kienzl, Wilhelm.** Waizenkirchen, Austria, 1857. Opera composer.
- Kirchner, Theodor.** Neukirchen, 1824; Hamburg, 1903. Composer.
- Kjerulf, Halfdan.** Christiania, 1818-1868. Composer.
- Klein, Bruno Oscar.** Osnabrück, 1858. Composer.
- Kleinmichel, Richard.** Posen, 1846; Charlottenberg, 1901. Pianist, composer.
- Klindworth, Karl.** Hanover, 1830. Pianist and teacher.
- Kneisel, Franz.** Roumania, 1865. Violinist.
- Kocian, Jaroslav.** Bohemia, 1884. Violinist.
- Köhler, Louis.** Brunswick, 1820; Königsberg, 1886. Pianist and composer.
- Kontski, Antoine de.** Cracow, 1817; Ivanitchi, 1899. Pianist and composer.
- Krehbiel, Henry Edward.** Ann Arbor, 1854. Critic and litterateur.
- Kreutzer, Conradin.** Mösskirch, Baden, 1780; Riga, 1849. Opera composer.
- Kreutzer, Rodolphe.** Versailles, 1766; Geneva, 1831. Violinist.
- Kroeger, Ernest R.** St. Louis, 1862. Pianist and composer.
- Kubelík, Jan.** nr. Prague, 1880. Violinist.
- Kücken, Friedrich Wilhelm.** Bleckede, Hanover, 1810; Schwerin, 1882. Song composer.
- Kuhlau, Friedrich.** Hanover, 1786; Copenhagen, 1832. Composer.
- Kullak, Theodor.** Posen, 1818; Berlin, 1882. Pianist and teacher.
- Lachner, Franz.** Rain, Bavaria, 1804; Munich, 1890. Composer.
- Lalo, Edouard.** Lille, 1823; Paris, 1892. Composer.
- Lamoureux, Charles.** Bordeaux, 1834; Paris, 1899. Conductor.
- Lamperti, Francesco.** Savona, Italy, 1813; Como, 1892. Singing master.
- Lang, Benjamin Johnson.** Salem, Mass., 1837; Boston, 1909. Pianist and conductor.
- Lange, Gustav.** Schwerstedt, 1830; Wernigerode, 1889. Pianist and composer.
- Lassen, Eduard.** Copenhagen, 1830-1904. Composer.
- Lasso, Orlando di.** Mons, Belgium, 1520 (?); Munich, 1594(?). Composer.
- Lecocq, Charles.** Paris, 1832. Operetta composer.
- Lehmann, Lilli.** Würzburg, 1848. Dramatic soprano.
- Lehmann, Liza (Mrs. Bedford).** London, 1862. Song composer.
- Lekeu, Guillaume.** Belgium, 1870; Angers, 1894. Composer.
- Lemare, Edwin H.** Isle of Wight, 1865. Organist.
- Léonard, Hubert.** nr. Liège, 1819; Paris, 1890. Violinist and teacher.
- Leoncavallo, Ruggiero.** Naples, 1858. Opera composer.
- Leroux, Xavier.** Velletri (Papal States), 1863. Composer.
- Leschetizky, Theodor.** Austrian Poland, 1830. Pianist and teacher.
- Liadov, Anatol.** St. Petersburg, 1855. Composer.
- Lichner, Heinrich.** Harpersdorf, 1829; Breslau, 1898. Composer.
- Liebling, Emil.** Pless, Silesia, 1851. Pianist and composer.
- Lind, Jenny.** Stockholm, 1820; Malvern Wells, 1887. Soprano.
- Liszt, Franz.** Raiding, Hungary, 1811; Bayreuth, 1886. Pianist and composer.
- Litolff, Henry Charles.** London, 1818; Paris, 1891. Pianist and composer.
- Loeffler, Charles Martin.** Mühlhausen, Alsatia, 1861. Violinist and composer.
- Loeschhorn, Albert.** Berlin, 1819-1905. Pianist and composer.
- Loewe, Carl.** nr. Halle, 1796; Kiel, 1869. Song and ballad composer.
- Loomis, Harvey Worthington.** Brooklyn, 1865. Composer.
- Lortzing, Albert.** Berlin, 1803-1851. Opera composer.
- Lotti, Antonio.** Hanover (?), 1667; Venice, 1740. Organist and composer.
- Lully, Jean-Baptiste.** Florence, 1633; Paris, 1687. Opera composer.
- Lvoff, Alexis von.** Reval, Russia, 1799; Kovno, 1870. Violinist and composer. Russian Hymn.
- MacCunn, Hamish.** Greenock, 1868. Scotch composer.

- MacDowell, Edward Alexander.** New York, 1861-1908. Pianist and composer.
- Macfarren, Sir George Alexander.** London, 1813-1887. Composer.
- Mackenzie, Sir Alex. Campbell.** Edinburgh, 1847. Scotch composer.
- Mahler, Gustav.** Kalescht, Bohemia, 1860. Conductor, composer.
- Mallbrán, María Felicità.** Paris, 1808; Manchester, 1836. Soprano.
- Mancinelli, Luigi.** Orvieto, 1848. Composer and conductor.
- Manney, Charles Fonteyn.** Brooklyn, N. Y., 1872. Composer.
- Marcello, Benedetto.** Venice, 1686; Brescia, 1739. Composer.
- Marchesi, Mathilde.** Frankfort-a.-M., 1826. Singing teacher.
- Mario, Giuseppe.** Cagliari, 1810; Rome, 1883. Dramatic tenor.
- Marmontel, Antoine-François.** Clermont-Ferrand, 1816; Paris, 1898. Pianist.
- Marschner, Heinrich.** Zittau, Saxony, 1795; Hanover, 1861. Opera composer.
- Martini, Giovanni B. (Padre Martini).** Bologna, 1706-1784. Composer.
- Martucci, Giuseppe.** Capua, 1856. Composer.
- Mascagni, Pietro.** Leghorn, 1863. Opera composer.
- Mason, Daniel Gregory.** Brookline, Mass., 1873. Litterateur and composer.
- Mason, Lowell.** Medfield, Mass.; 1792; Orange, N. J., 1872. Pioneer in American music.
- Mason, William.** Boston, 1829; New York, 1908. Pianist, composer.
- Massenet, Jules.** Montaux, 1842. Opera composer.
- Mathews, W. S. B.** New London, N. H., 1837. Litterateur and educator.
- Maurel, Victor.** Marseilles, 1848. Dramatic baritone.
- Méhul, Etienne-Nicolas.** Givet, 1763; Paris, 1817. Opera composer.
- Melba, Nellie (Mitchell).** Melbourne, 1865. Soprano.
- Mendelssohn, Felix.** Hamburg, 1809; Leipzig, 1847. Composer.
- Mercadante, Saverio.** Altamura, 1795; Naples, 1870. Opera composer.
- Merkel, Gustav.** Saxony, 1827; Dresden, 1885. Organist and composer.
- Meyerbeer, Giacomo (Jacob Liebmann Beer).** Berlin, 1791; Paris, 1864. Opera composer.
- Meyer-Helmund, Erik.** St. Petersburg, 1861. Composer.
- Mills, Sebastian Bach.** England, 1838; Wiesbaden, 1898. Pianist.
- Millöcker, Karl.** Vienna, 1842; Baden, 1899. Operetta composer.
- Molique, Wilhelm Bernhard.** Nuremberg, 1802; Kannstadt, 1869. Violinist and composer.
- Monteverde, Claudio.** Cremona, 1567; Venice, 1643. Composer.
- Morley, Thomas.** England, 1557 (?); London, 1604. Composer and contrapuntist.
- Moscheles, Ignaz.** Prague, 1794; Leipzig, 1870. Pianist.
- Moszkowski, Moritz.** Breslau, 1854. Pianist and composer.
- Mottl, Felix.** nr. Vienna, 1856. Conductor.
- Moussorgski, Modest Petrovitch.** Toropetz, 1839; St. Petersburg, 1881. Composer.
- Mozart, Wolfgang Amadeus.** Salzburg, 1756; Vienna, 1791. Composer.
- Muck, Karl, Dr.** Darmstadt, 1859. Conductor.
- Naprawnik, Edward.** Bohemia, 1839. Composer.
- Nessler, Victor E.** Baldenheim, 1841; Strassburg, 1890. Opera composer.
- Nevada, Emma (Wixon).** Austin, Nevada, 1860 (?). Soprano.
- Nevin, Ethelbert.** nr. Pittsburg, 1862; New Haven, 1901. Composer.
- Nicodé, Jean-Louis.** nr. Posen, 1853. Pianist and composer.
- Nicolai, Otto.** Königsberg, 1810; Berlin, 1849. Opera composer.
- Niemann, Albert.** nr. Magdeburg, 1831. Dramatic tenor.
- Nikisch, Arthur.** Hungary, 1855. Conductor.
- Nilsson, Christine.** Sweden, 1843. Soprano.
- Nordica, Lillian.** Farmington, Me., 1859. Dramatic soprano.
- Nordraak, Elkar.** Christiania, 1842; Berlin, 1866. Composer.
- Offenbach, Jacques.** Cologne, 1819; Paris, 1880. Creator of Opéra Bouffe.
- Okeghem, Joannes.** East Flanders, 1430 (?); Tours, 1495 (?). Founder of Netherland School.
- Pachmann, Vladimir de.** Odessa, 1848. Pianist.
- Paderewski, Ignaz Jan.** Podolia, Poland, 1859. Pianist and composer.
- Paganini, Niccolò.** Genoa, 1782; Nice, 1840. Violinist.
- Page, N. Clifford.** San Francisco, 1866. Composer.

- Paine, John Knowles.** Portland, Me., 1839; Boston, 1906. Composer and teacher.
- Paisiello, Giovanni.** Taranto, 1741; Naples, 1816. Opera composer.
- Palestrina, Giovanni Perluigi da.** Palestrina, 1515 (?); Rome, 1594. Composer.
- Panofka, Heinrich.** Breslau, 1807; Florence, 1887. Violinist and singing master.
- Panzeron, Auguste-Mathieu.** Paris, 1796-1859. Singing master.
- Parepa-Rosa, Euphrosyne.** Edinburgh, 1836; London, 1874. Soprano.
- Parker, Horatio W.** Auburndale, Mass., 1863. Organist and composer.
- Parry, Sir Charles Hubert H.** Bournemouth, Eng., 1848. Composer.
- Patti, Adolina.** Madrid, 1843. Soprano.
- Paur, Emil.** Czernowitz, 1855. Conductor.
- Perabo, Ernst.** Wiesbaden, 1845. Pianist.
- Pergolesi, Giovanni Battista.** Jesi, 1710; nr. Naples, 1736. Composer.
- Peri, Jacopo.** Florence, 1560 (?) - 1630 (?). The first opera composer.
- Perosi, Don Lorenzo.** Tortona, 1872. Composer.
- Perry, Edward Baxter.** Haverhill, Mass., 1855. Lecturer-pianist.
- Pessard, Emile L. H.** Montmartre, 1843. Composer.
- Phillipp, Isidor.** Pesth, 1863. Pianist.
- Piccinni, Nicola.** Bari, 1728; nr. Paris, 1800. Opera composer.
- Pierné, Gabriel.** Metz, 1863. Composer.
- Plaldy, Louis.** Hubertsburg, 1810; Grimma, 1874. Piano teacher.
- Planquette, Robert.** Paris, 1850-1903. Operetta composer.
- Pleyel, Ignaz-Joseph.** nr. Vienna, 1757; nr. Paris, 1831. Composer and piano maker.
- Pohl, Carl.** Teplitz, Bohemia, 1861. Composer and conductor.
- Ponchielli, Amilcare.** nr. Cremona, 1834; Milan, 1886. Opera composer.
- Popper, David.** Prague, 1845. Cellist and composer.
- Porpora, Nicolò.** Naples, 1686-1766 (?). Singing master.
- Powell, Maud.** Peru, Ill., 1868. Violinist.
- Prout, Dr. Ebenezer.** Northamptonshire, Eng., 1835. Theorist and composer.
- Puccini, Giacomo.** Lucca, 1858. Opera composer.
- Pugno, Raoul.** Montronge, 1852. Pianist.
- Purcell, Henry.** London, 1658-1695. Composer.
- Rachmaninoff, Sergei V.** Novgorod, 1873. Composer and pianist.
- Raff, Joachim.** Lachen, Switz., 1822; Frankfurt, 1882. Composer.
- Rameau, Jean-Philippe.** Dijon, 1683; Paris, 1764. Opera composer and theorist.
- Randegger, Alberto.** Trieste, 1832. Composer and singing master.
- Reger, Max.** Brand, Bavaria, 1873. Composer.
- Reinecke, Carl.** Altona, 1824. Composer, pianist and teacher.
- Reisenauer, Alfred.** Königsberg, 1863; Libau, 1907. Pianist.
- Riemann, Hugo.** nr. Sondershausen, 1849. Theorist.
- Reyer, Louis Etienne.** Marseilles, 1823; Toulouse, 1909. Opera composer and critic.
- Rheinberger, Joseph.** Vaduz, 1837; Munich, 1901. Organist and composer.
- Richter, Ernst Friedrich.** Gross-Schönau, 1808; Leipzig, 1879. Theorist and composer.
- Richter, Hans.** Raab, Hungary, 1843. Conductor.
- Ries, Franz.** Berlin, 1846. Composer and publisher.
- Rimski-Korsakov, Nicolai.** Tikhvin, Novgorod, 1844-1908. Composer and conductor.
- Rinck, Johann.** Elgersburg, 1770; Darmstadt, 1846. Organist and composer.
- Rogers, James H.** Fair Haven, Conn., 1857. Organist and composer.
- Rode, Pierre.** Bordeaux, 1774; nr. Damazon, 1830. Violinist.
- Röntgen, Julius.** Leipzig, 1855. Composer and pianist.
- Ropartz, J. Guy.** Guingamp, France, 1864. Composer.
- Rosenthal, Moriz.** Lemberg, 1862. Pianist.
- Rossini, Gioachino Antonio.** Pesaro, 1792; Paris, 1868. Opera composer.
- Rousseau, Samuel Alexandre.** Aisne, 1853; Paris, 1904. Composer and organist.
- Rubinstein, Anton.** Wechotynecz, 1830; St. Petersburg, 1894. Composer and pianist.
- Ruckers, Hans.** Antwerp, 15 —; 1640 (?). Maker of spinets and clavi-chords.

- Sacchini, Antonio M. G.** nr. Naples, 1734; Paris, 1786. Opera composer.
- Saint-Saëns, Camille.** Paris, 1835. Organist, pianist, composer.
- Salleri, Antonio.** Legnago, 1750; Vienna, 1825. Composer.
- Sarasate, Pablo de.** Pamplona, Spain, 1844; Biarritz, 1908. Violinist.
- Sauret, Emile.** Dun-Le-Roi, 1852. Violinist.
- Scarlatti, Alessandro.** Sicily, 1659; Naples, 1725. Founder of Neapolitan School.
- Scarlatti, Domenico.** Naples, 1683(?)–1757. Composer.
- Scharwenka, Philipp.** Posen, 1847. Pianist and composer.
- Scharwenka, Xaver.** Posen, 1850. Pianist and composer.
- Schelling, Ernest.** Belvedere, N. J., 1876. Composer and pianist.
- Schillings, Max.** Düren, 1868. Composer.
- Schoenefeld, Henry.** Milwaukee, Wis., 1857. Pianist and composer.
- Schubert, Franz.** nr. Vienna, 1797; Vienna, 1828. Composer.
- Schuch, Ernst von.** Graz, 1847. Conductor.
- Schuett, Eduard.** St. Petersburg, 1856. Composer and pianist.
- Schumann, Georg.** Saxony, 1866. Composer.
- Schumann, Robert.** Zwickau, 1810; nr. Bonn, 1856. Composer.
- Schumann, Clara.** Leipzig, 1819; Frankfort-a-M., 1896. Pianist. (Wife of Robert S.)
- Schumann-Helink, Ernestine.** nr. Prague, 1861. Dramatic contralto.
- Schütz, Heinrich.** Köstritz, 1585; Dresden, 1672. "Father of German Music."
- Schytte, Ludwig.** Aarhus, Denmark, 1850. Pianist and composer.
- Scriabine, Alexander.** Moscow, 1872. Pianist and composer.
- Seldi, Anton.** Pesth, 1850; New York, 1898. Wagnerian conductor.
- Seiss, Isidor.** Dresden, 1840. Pianist and composer.
- Sembrich, Marcella.** Wisniewczyk, Galicia, 1858. Soprano.
- Serov, Alexander N.** St. Petersburg, 1820–1871. Composer and critic.
- Servais, Adrien-François.** Hal, nr. Brussels, 1807–1866. Cellist.
- Ševčík, Ottakar.** Horaždowitz, Bohemia, 1852. Violinist and teacher.
- Scgambati, Giovanni.** Rome, 1843. Pianist and composer.
- Shakespeare, Wm.** Croydon, Eng., 1849. Tenor and singing master.
- Shelley, Harry Rowe.** New Haven, 1858. Composer.
- Sherwood, Wm. Hall.** Lyons, N. Y., 1854. Pianist.
- Sibelius, Jan.** Finland, 1865. Composer.
- Sieber, Ferdinand.** Vienna, 1822; Berlin, 1895. Singing master.
- Sinding, Christian.** Kongberg, Norway, 1856. Composer.
- Sitt, Hans.** Prague, 1850. Violinist.
- Sivori, Ernesto Camillo.** Genoa, 1815–1894. Violinist.
- Sjögren, Emil.** Stockholm, 1853. Composer.
- Smart, Henry.** London, 1813–1879. Organist and composer.
- Smetana, Friedrich.** Bohemia, 1824; Prague, 1884. Composer.
- Smith, Wilson G.** Elyria, O., 1855. Composer and pianist.
- Sontag, Henriette.** Coblenz, 1806; Mexico, 1854. Soprano.
- Sousa, John Philip.** Washington, D. C., 1856. Bandmaster and composer.
- Spindler, Fritz.** Würzbach, 1817; nr. Dresden, 1905. Pianist and composer.
- Spohr, Louis.** Brunswick, 1784; Cassel, 1859. Violinist and composer.
- Spontini, Gasparo.** Majolati, 1774–1851. Opera composer.
- Stainer, Sir John.** London, 1840–1901. Organist and composer.
- Stanford, Sir Charles Villiers.** Dublin, 1852. Composer.
- Stcherbacheff, Nicolai de.** Russia, 1853. Composer.
- Sternberg, Constantin von.** St. Petersburg, 1852. Pianist and composer.
- Stock, Frederick.** Jülich, Ger., 1872. Conductor.
- Stradella, Alessandro.** Naples, 1645 (?); Genoa, 1681 (?). Composer.
- Stradivari, Antonio.** Cremona, 1649 (?–1737. Violin maker.
- Strauss, Johann (Sr.).** Vienna, 1804–1849. "Father of the Waltz."
- Strauss, Johann.** Vienna, 1825–1899. "Waltz King" and operetta composer.
- Strauss, Richard.** Munich, 1864. Composer.
- Strong, Templeton.** New York, 1855. Composer.
- Strube, Gustav.** Ballenstedt, 1867. Violinist and composer.
- Suk, Josef.** Křečovic, Bohemia, 1874. Violinist and composer.
- Sullivan, Sir Arthur.** London, 1842–1900. Operetta composer.

- Suppé, Franz von.** Dalmatia, 1820; Vienna, 1895. Operetta composer.
- Svendsen, Johann L.** Christiania, 1840; London, 1888. Composer and violinist.
- Tamagno, Francesco.** Turin, 1851; Varese, 1905. Dramatic tenor.
- Taneïeff, Sergel.** Russia, 1856. Composer.
- Tapper, Thomas.** Canton, Mass., 1864. Educator.
- Tartini, Giuseppe.** Istria, 1692; Padua, 1770. Violinist.
- Tausig, Carl.** Warsaw, 1841; Leipzig, 1871. Pianist.
- Ternina, Milka.** Croatia, 1864. Dramatic soprano.
- Thalberg, Sigismund.** Geneva, 1812; Naples, 1871. Pianist, composer.
- Thomas, Ambrose.** Metz, 1811; Paris, 1896. Opera composer.
- Thomas, Arthur Goring.** Sussex, 1850; London, 1892. Composer.
- Thomas, Theodore.** Essen, 1835; Chicago, 1905. Conductor.
- Thomé, Francis.** Port Louis, Mauritius, 1850. Composer.
- Thomson, César.** Liège, 1857. Violinist.
- Tinel, Edgar.** Linay, Belgium, 1854. Composer.
- Tchalkovsky, Peter Ilitch.** Votinsk, 1840; St. Petersburg, 1893. Composer.
- Upton, George P.** Boston, 1835. Critic and litterateur.
- Vaccal, Niccolò.** Tolentino, 1790; Pesaro, 1848. Singing master.
- Van der Stucken, Frank.** Fredericksburg, Texas, 1858. Conductor and composer.
- Verdi, Giuseppe.** Roncole, 1813; Milan, 1901. Opera composer.
- Vieuxtemps, Henri.** Verviers, Belg., 1820; Algiers, 1881. Violinist.
- Viotti, Giovanni Battista.** Fontaneto da Po, 1753; London, 1824. Violinist and composer.
- Vogler, Georg Joseph Abbé.** Würzburg, 1749; Darmstadt, 1814. Theorist and composer.
- Volkmann, Robert.** Saxony, 1815; Pesth, 1883. Composer.
- Wagner, Richard.** Leipzig, 1813; Venice, 1883. Dramatic composer.
- Wallace, Wm. Vincent.** Waterford, Ireland, 1814; France, 1865. Composer.
- Warren, Samuel Prowse.** Montreal, 1841. Organist and composer.
- Weber, Carl Maria von.** Eutin, 1786; London, 1826. Opera composer.
- Wegellus, Martin.** Helsingfors, Finland, 1846-1906. Composer and conductor.
- Weingartner, Felix.** Dalmatia, 1863. Conductor and composer.
- Whiting, Arthur B.** Cambridge, Mass., 1861. Pianist and composer.
- White, Maude Valérie.** Dieppe, 1855. English composer.
- Whiting, Geo. E.** Holliston, Mass., 1842. Organist and composer.
- Widor, Charles.** Lyons, 1845. Composer and organist.
- Wienlowski, Henri.** Poland, 1835; Moscow, 1880. Violinist.
- Wihtol, Joseph.** Russia, 1863. Composer.
- Wilhelmj, August.** Nassau, 1845; London, 1908. Violinist.
- Wolf, Hugo.** Windischgrätz, 1860; Vienna, 1903. Composer.
- Wolf-Ferrari, Ermanno.** Venice, 1876. Composer.
- Wollenhaupt, Heinrich Adolf.** nr. Leipzig, 1827; New York, 1863. Pianist and composer.
- Wolstenholme, Wm.** Blackburn, Eng., 1865. Organist and composer (blind).
- Wood, Henry J.** London, 1870. Conductor and composer.
- Ysaye, Eugène.** Liège, 1858. Violinist.
- Zarlino, Gioseffo.** Chioggia, 1517; Venice, 1590. Theorist.
- Zerrahn, Carl.** Mecklenburg, 1826. Conductor.
- Zichy, Geza.** Sztára, Hungary, 1849. Left-hand pianist. Composer.
- Zumpe, Hermann.** Taubenheim, 1850; Munich, 1903. Conductor and composer.



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